

remanufacturing REMANPATH pathways Circular

Welcome to our first newsletter!

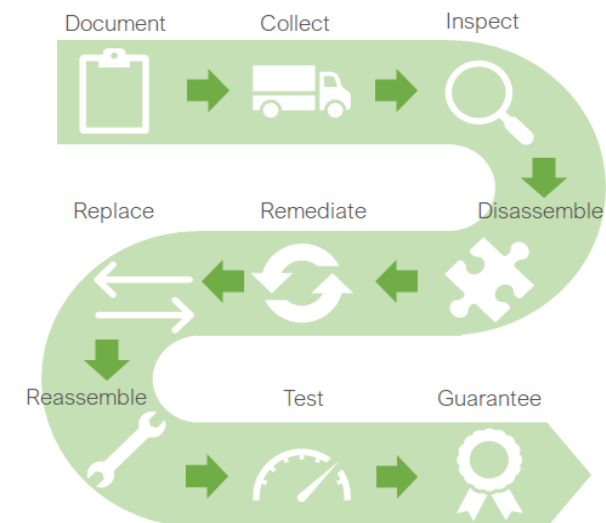
Remanpath Circular is the newsletter for **Remanpath**, a project that uses education to develop remanufacturing competencies in SMEs. The mission of **EIT Raw Materials**, which funds the project, is to develop raw materials into a major strength for Europe. VTT in Finland leads Remanpath (<https://www.vtt.fi/sites/remanshipfinder/>) with partners from TU Delft, Wuppertal Institute, Grenoble INP, Coventry University and Oakdene Hollins.

In this edition we explain how remanufacturing can help industry transition to use natural resources more sustainably. Partners share their stories and images from recent remanufacturing events. We also feature our **Expert View**, with Q&A answers from David Fitzsimons, Director of the European Remanufacturing Council.

Climate Change: Why Bother?

As climate change hits the news during **Extinction Rebellion protests**, awareness is being raised of the different ways to preserve the Earth's resources. The 'Circular Economy' and remanufacturing can play a key role in protecting these resources and sustaining raw materials. The 'Circular Economy' is a profitable business model that keeps materials and products in circulation rather than throwing them away and replacing them with newly mined resources. The 'Circular Economy' model works alongside the old waste hierarchy model of prevent, reduce, recycle and dispose, but prioritises business models that can mix and match re-use and recycling in the most beneficial way.

Remanufacturing is one Circular Economy approach now explicitly recognised as having extremely high economic value. Through remanufacturing it is possible to maintain a large amount of the material, energy and labour invested in complex products keeping them at 'as-new' quality while using a fraction of the resources needed for a new product. Remanufacturing is highly beneficial to the environment because it reduces energy consumption, cuts carbon emissions and keeps materials in use rather than sending them to landfill. Remanufacturing can also benefit customers by producing goods at prices that typically are 60-80% lower than new products. There are also quicker lead times and the availability of products that are no longer made can be maintained. Remanufacturing



tends to take place close to its market, therefore supporting the local economy by creating local jobs. Manufacturers can benefit from becoming a remanufacturer in a number of ways. Remanufactured goods tend to deliver higher margins than new products, making businesses more profitable. Their workforce develops valuable problem-solving skills as they learn how to disassemble and reassemble products. This makes their work more interesting, resulting in higher rates of staff retention than for those working on production lines. Through trade-in schemes, remanufacturers can build better relationship with their customers than those which rely on throw-away, one-off purchases.

<http://blogs.coventry.ac.uk/researchblog/remanufacturing-why-bother/>

Spotlight on... *Buildings*



Remanufacturing Building Products Workshop

Remanpath partners run practical workshops introducing SMEs to remanufacturing and showing how it can be used. Here, TU Delft reports on their workshop for building firms, which was organised by Tanya Tsui, David Peck, Tillmann Klein and Juan Azcarate-Aguerre, from the Circular Built Environment Hub at TU Delft.



On 22 January 2019, the Circular Built Environment Hub in collaboration with EIT Raw Materials organised a workshop on remanufacturing of building products at the Faculty of Architecture and the Built Environment at TU Delft. The event attracted stakeholders interested in moving the building industry towards a circular economy. Participants included building product manufacturers, academics, building contractors, consultants, engineers and architects from both The Netherlands and Germany.

The workshop included lectures about remanufacturing, as well as exercises that allowed the participants to imagine how their own company could start remanufacturing. During the exercise, companies discussed the possibility of reverse logistics in the building industry, keeping track of building products throughout their lifetime, and how different stakeholders in the industry could collaborate in order to make this happen. At the end of the workshop, a participant noted: “The issues we’ve discussed today cannot be solved by one company alone. The problems of the linear economy are systemic, so our solutions need to be systemic too.”

About TU Delft: Delft University of Technology (TU Delft) is the Netherlands’ oldest and largest university of technology. Its ground-breaking research, education and new venture creation profile focus on engineering and applied sciences. TU Delft provides technological solutions that facilitate the transition to a sustainable, flourishing economy. It is viewed by the business community as a source of outstanding professional scientists and engineers, as a producer of excellent practical knowledge and an innovative partner.



Spotlight on... *Digitisation*



Digitisation & Remanufacturing Lecture

Wuppertal Institute organized a lecture and workshop on digitisation and remanufacturing for 50 fellows from the Prospective Leaders of the Federal Chancellor Fellowship Programme.

Under the patronage of the Chancellor of the Federal Republic of Germany, the Alexander von Humboldt Foundation sponsors prospective leaders from the USA, the Russian Federation, the People's Republic of China, Brazil and India in professional fields, such as politics, public administration, business, society and culture. Fellows can spend a year in Germany networking with other prospective leaders to explore new solutions to the global issues of our times. During a two-week study tour the Fellows familiarize themselves with the current social, political, cultural, economic and historical conditions in Germany. The tour for the 50 German Chancellor Fellows began in Hamburg, Germany and finished in Brussels, Belgium, at the Wuppertal Institute on 9th April 2019.

Dr. Stephan Ramesohl, project co-ordinator in the division Circular Economy at the Wuppertal Institute gave a presentation on the circular economy and perspectives and potentials of digitisation as a solution contribution.

The second presentation was given by Carina Koop, Research Fellow in the division Circular Economy at the Wuppertal Institute.

Carina gave the prospective leaders the opportunity to get an insight into the current project Remanpath from the EIT Raw Materials. The Fellows had the opportunity to test the learning material that was developed for the project through an interactive exercise. Following the lectures, Fellows had the opportunity to ask the panel questions and take part in a discussion.



About Wuppertal Institute: The institute undertakes research and develops models, strategies, and instruments for transitions to local, national and international sustainable development. Its sustainability research focuses on resources, climate, and energy-related challenges and how they relate to economy and society. Special emphasis is placed on analyzing and stimulating innovations that decouple economic growth and wealth from natural resource use. The thematic focus for the Division of Circular Economy is on a transition towards a circular economy, in which waste is avoided and products are used as long as possible.

David Fitzsimons

Director of the European Remanufacturing Council, shares his thoughts....

Why should businesses get involved?

It is the attitude of OEMs towards product value retention that largely determines whether specialist remanufacturers will have a stable business that can grow with external finance. As more OEMs are changing their position this may open up new opportunities for those that can service OEMs.

What is the biggest challenge for firms?

The legal framework has been designed for a linear economy. It continues to be especially difficult for non-approved independents to thrive. They often discover the latest opportunities...but then struggle to find external sources of finance.

What is the biggest benefit?

In many product categories, the resource saving from remanufacture translates into a financial saving. If policy makers could add in additional value from the CO2 savings for example, then more product categories could be brought inside the boundaries within which remanufacturing is economically viable. If this is the way the economy is heading, then specialists in this area should be well positioned to benefit.

An example of best practice?

Good practice examples are almost all in the B2B space. Volvo is an example of an OEM that sees

product value retention as a central element of their corporate strategy. Volvo expect us to buy fewer personally owned vehicles but instead to use vehicles through intermediaries. Keeping the cost of maintenance as low as possible will be a competitive advantage...this will include having remanufactured components available.

What single piece of advice would you give?

It depends on the product and the customers, but in all cases make sure your investors understand the IP issues.

What is the future for remanufacturing?

It's in the balance. On the one hand, commodities and resources continue to get cheaper, so single use disposable products will be advantaged. On the other hand, free trade is being disassembled and the environmental agenda now favours value retention...and not just material recycling. The latest digital technologies could enable more remanufacturing, but only if there is a clear driver to do so. The European Remanufacturing Council exists to push us all closer to one of these competing visions of the future. We are building a coalition of those that think remanufacturing should be a normal part of a product or component life cycle.



Useful Links & Resources

<https://www.vtt.fi/sites/remanpathfinder/> Remanpath project website.

<http://www.remancouncil.eu/> European Remanufacturing Council supports firms to promote/develop remanufacturing.

<http://www.remanufacturing.fr/> French remanufacturing platform to help firms to develop Remanufacturing activities.

<https://www.rescoms.eu/> European project ResCoM methodologies and tools for closed-loop manufacturing systems.

<https://www.remanufacturing.eu/> ERN (European Remanufacturing Network) project supports the remanufacturing industry and policy and strategy needs through sector representation.

<https://www.remanufacturing.eu/case-study-tool.php> ERN cases of firms that have achieved remanufacturing benefits.

<http://repro2.g-scop.grenoble-inp.fr/ang/indexa.php> Repro² tool assists designers to create products for remanufacture.

<http://www.scot-reman.ac.uk/> Scottish Institute for Remanufacture (SIR) works with companies of all sizes to support projects to help increase reuse, repair and remanufacture in their operations, to increase innovation in remanufacturing.