Re:CREATe
Advancing the Remanufacturing Industry in India

An Overview

June 2022
Convergences

- Climate Crisis
- Linear Economy to Circular Economy
- ESG Investing
- Social Expectations
- Regulation
- Resource Stewardship
Remanufacturing: Definition

A standardized industrial process by which cores* are returned to same-as-new, or better, condition and performance.

The process is in line with specific technical specifications, including engineering, quality and testing standards.

The process yields fully warranted products.

* A core is a previously sold, worn or non-functional product or part, intended for the remanufacturing process. During reverse logistics, a core is protected, handled and identified for remanufacturing to avoid damage and to preserve its value. A core is not waste or scrap and is not intended to be reused before remanufacturing.
Remanufacturing is **NOT** the same as Recycling, Reusing, Repurposing, Repairing, Refurbishing, or Reconditioning. However, it may encompass many of these activities. In certain industries, some of these terms are used interchangeably with 'remanufacturing'.
Remanufacturing: Benefits

- GHG Reductions
- Lower Prices, Higher Profits
- Better Customer Relationships
- Raw Material, Energy, Waste
- Job Creation
- Product Availability, Purchasing Flexibility
India’s first and only research and advocacy think tank that specifically aims to catalyze and advance remanufacturing in the nation.
Rajiv Ramchandra is the founder of Re:CREATe. He has previously served as the Business Manager, and in engineering roles for nearly seven years at the New York State Pollution Prevention Institute (NYSP2I) housed at the Rochester Institute of Technology’s (RIT) Golisano Institute for Sustainability (GIS).

Rajiv holds an ME in Mechanical Engineering (2006) from the University of Sussex in England, an ME in Engineering Management (2009) from the Kate Gleason College of Engineering and an MBA (2014) from the Saunders College of Business, both at RIT.

Mark C. Coleman is an advisor to Re:CREATe. He is an award-winning author and a recognized voice, business advisor, entrepreneur, and consultant on sustainable enterprise and the convergence of energy, technology, environmental stewardship, and innovation. In 2017, Mark was recognized by Trust Across America-Trust Around the World (TAA-TAW) as a Top Thought Leader in Trust.

He is the author of three books, The Sustainability Generation, Time to Trust, and The Dignity Doctrine and is an adjunct instructor at Syracuse University.

Vaishali Kulkarni is an advisor to Re:CREATe. She currently serves as in the role of Engineering Leader, New and ReCon Parts Operations at Cummins in India and has a background in mechanical engineering.

She has extensive technical and real-world experience in project and product engineering and has previously served at many global companies including KSB Pumps, Textron, and Virgo Valves (Emerson Company).
Theory of Change

**Key Beneficiaries:** Remanufacturing and Manufacturing Companies, SMEs, Startups

**Partners:** Industry Bodies, Chambers of Commerce, Governments, Multilateral Agencies, Academic Institutions, Government Research Bodies, Private Research Bodies, Donors

**Problem**

- In the nascent Circular Economy narrative in India, remanufacturing has been ignored.
- Industry, government, academia, investors have low or no awareness of remanufacturing.
- There is no industry, research, or advocacy body that is shining a spotlight on the relevance of remanufacturing nor catalyzing its growth and advancement.

**Interventions**

- Raise awareness
- Forge meaningful partnerships with relevant orgs. nationally and globally
- Industry Analysis & Benchmarking
- Industry Roadmapping
- Policy Research & Advocacy
- Industry Training Programs & Toolkits
- Curriculum Development
- Applied Research

**Outputs**

- Stakeholder mapping, prioritization and engagement
- Webinars, workshops and roundtables
- Publication of articles and white papers
- Development and dissemination of industry roadmaps
- Development and delivery of training programs
- Organization of an Annual Conference

**Outcomes**

- Partnerships with industry bodies, academic institutions, research organizations
- Increase in the number of manufacturers undertaking remanufacturing
- Positive impact on climate, waste, and resource crises
- Favorable government policies to advance remanufacturing
- Increase in national and foreign investment

**Vision**

- To be co-creators of a thriving remanufacturing industry in India.

**Mission**

- To develop and provide the tools, resources, guidance and inspiration to makers, doers, designers, learners, and businesses empowering them to develop and provide remanufactured products and related services that are in harmony with the principles of sustainability.
Our Stakeholders
Our Business Model

**FUNDERS & SPONSORS**
- **VALUE PROPOSITION**
  - Advance sustainable industrial dev.
  - Support a meaningful cause
  - Complement funders’ programs

**GOVERNMENT**
- **VALUE PROPOSITION**
  - Reduction in waste and pollution
  - Resource conversation
  - Resource efficiency
  - Transition to CE
  - Job creation

**BUSINESSES & STARTUPS**
- **VALUE PROPOSITION**
  - Growth in business
  - Visibility with key stakeholders
  - Training programs
  - Policy and research outcomes

**INDUSTRY BODIES & MULTILATERAL AGENCIES**
- **VALUE PROPOSITION**
  - Sustainability goals
  - Industry evolution
  - Trade and partnerships
  - Relationship building
  - Events
  - Recruiting members

**APPLIED RESEARCH & ACADEMIA**
- **VALUE PROPOSITION**
  - Applied research
  - Curriculum creation
  - Faculty publications
  - Student exposure and projects
  - Executive education

Bridging industry with academia and research
- Provide fiscal or in-kind support to Re:CREATEe’s mission and programs
- Meet common goals and aspirations
- Policy advice, forming stakeholder partnerships
- Development of plans, policies that support the advancement of remfg.
- Access to and convening of industry, and key stakeholders
- Access to influencers and opinion leaders, business opportunities
- Participate on a platform that advances remfg., CE, sustainability
- Participate in creating industry roadmaps, forming advocacy coalitions, shaping research agenda

Real-world research-based solutions
- Re:CREATEe’s mission and programs
- Common goals and aspirations
- Stakeholder partnerships
- Plans, policies that support the advancement of remfg.
- Industry, and key stakeholders
- Influencers and opinion leaders, business opportunities
- Advocacy coalitions, shaping research agenda

**Research Community**
- Bridge industry with academia and research
- Real-world research-based solutions

**Academia**
- Applied research
- Curriculum creation
- Faculty publications
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- Executive education

**Government**
- Reducing waste and pollution
- Resource conversation
- Resource efficiency
- Transition to CE
- Job creation

**Businesses**
- Growth in business
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- Training programs
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**Multilateral Agencies**
- Sustainability goals
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**Startups**
- Growth in business
- Visibility with key stakeholders
- Training programs
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**Philanthropists**
- Support a meaningful cause
- Complement funders’ programs
- Common goals and aspirations
- Stakeholder partnerships
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Our Aims

- Stakeholder Mapping, Prioritization, and Engagement
- Industry Roadmaps, Whitepapers, Reports
- Fundraising
- Public Policy Research and Advocacy
- Webinars, Workshops, Annual Conference
- Training Programs, Industry Toolkits, Academic Curriculum
Industry Roadmapping

Phase 1: Roadmap Planning
- Task 1: Stakeholder Identification, Mapping and Engagement
- Task 2: Establishment of an Advisory Committee
- Task 3: Identification of Focus Sectors
- Task 4: Development of Roadmap Framework

Phase 2: Roadmap Development
- Task 1: Information and Data Gathering
- Task 2: Information and Data Analysis
- Task 3: Roadmap Creation (in-person/online collaboration)
- Task 4: Roadmap Finalization

Phase 3: Roadmap Dissemination
- Task 1: Mainstream Media and Social Media Strategy
- Task 2: Online and Email Distribution
- Task 3: Stakeholder Workshops
- Task 4: Industry Conference

Phase 4: Roadmap Evolution
The five goals are based on the 'Universal Circular Economy Policy Goals' identified by the Ellen MacArthur Foundation.
Our Work: Webinars and Engagements

You’re invited to our webinar:
Remanufacturing and the Circular Economy
Learn more and register at: www.recreate.org
Speakers:

- Dr. Rishi Ramachandran
- Dr. Priyanka Mathur
- Dr. Sudhakar Reddy
- Dr. Vinit Kumar
- Dr. Deepak Singh

Wednesday, September 23, 2020
2:00 pm IST / 11:00 am CEST
50 minutes

You’re invited to our webinar:
Remanufacturing in the Indian Auto Industry
Learn more and register at: www.recreate.org
Speakers:

- Gopi Ramesh
- Anand Venkatraman
- Vishal Bhat
- Dr. Rahul Misra
- Bhaskar Dey

Thursday, October 22, 2020
4:00pm IST | 10:00am CET | 5:00am ET
90 minutes

Register for free at:
www.recreate.org/register
Our Work: Webinars and Engagements

**Remanufacturing: The Future of Sustainable Business**
Join us for a conversation to learn about remanufacturing, its tremendous potential in India, and how it can lead to more sustainable, climate-friendly, and profitable businesses in the future.

**TUESDAY, APRIL 26, 2022**
**5:00 PM TO 6:00 PM IST**

**Registration Link**
https://tinyurl.com/RemanTheFutureofSustainableBusiness

**L to R:** Kapil Kaul, National President, Indo-American Chamber of Commerce; Scott Ticknor, Deputy Principal Officer, US Consulate General Mumbai; Rajiv Ramchandra, Founder and Director, Re:CREATe; Sushant Naik, Global Head - Government and Public Affairs, Tata Motors

**On screen:** Rahul Sahai, Director – Aftermarket & Marketing Leader, Cummins India

**On screen:** John Chalifoux, President and CEO, MERA – The Association for Sustainable Manufacturing

In-person roundtable discussion with IACC members
Our Work: Articles

REMANUFACTURING: INDIA IN FOCUS

Remanufacturing has an unquestionable role to play in bringing the vision of a circular and regenerative economy to life, especially in developing nations like India. This is why Raj Rameshwar founded Re:CREATE, a research and advisory enterprise to catalyze and advance the remanufacturing industry in the nation.

This decade has been at the forefront of many discussions and debates for sustainable living and the need for conscious consumerism. Consumer goods are made and used, recycled, and tossed aside at an alarming rate. It is vital that we change our thinking and habits to prevent the massive cycle of waste.

Remanufacturing is a crucial part of this solution. With the right procedures, it can be an economically viable and environmentally sustainable option. This article will explore the benefits of remanufacturing, how it can positively impact our lives, and what steps need to be taken to promote it in India.

Enduring Goodness: Durable Goods as Ambassadors of a Regenerative Economy

Consumer durable goods like electronic products and home appliances have been technological innovations that have played a significant role in easing our lives and improving the quality of human life. Whether it’s the ease of having clean clothes at the push of a button or listening to our favorite music from across the ages, these innovations to human ingenuity have shaped modern life and allowed us new pursuits by freeing up time, as well as the ability to enjoy life’s many pleasures in the comfort of our homes.
**Our Work: Articles**

- **The Brief**
  - **Source:** The Brief
  - **Type:** Article
  - **Date:** [Unknown]

  **Title:** The Need For Introduction To Sustainable Manufacturing

  **Summary:** The need for sustainable manufacturing is becoming ever more apparent, as it is a key factor in achieving environmental goals and ensuring long-term profitability for businesses. Sustainable manufacturing involves the integration of environmental, social, and economic considerations into the design, production, and management of products and services.

  **Key Points:**
  - Sustainable manufacturing can lead to increased efficiency and reduced costs.
  - It helps in reducing environmental impact and enhances brand reputation.
  - Sustainable practices can attract customers who value eco-friendliness.

- **Re:CREATE**
  - **Source:** Re:CREATE
  - **Type:** Article
  - **Date:** [Unknown]

  **Title:** Remanufacturing: The Untapped Opportunity

  **Summary:** Remanufacturing is a process of refurbishing used products to make them as good as new, thereby extending their lifespan and reducing the need for raw materials. This practice is particularly beneficial for industries with high inventory costs and long product lifecycles.

  **Key Points:**
  - Remanufacturing can significantly lower costs compared to producing new products.
  - It reduces environmental impact by conserving energy and raw materials.
  - Remanufacturers can offer competitive prices, making them attractive to consumers.

  **Impact:** Remanufacturing has the potential to create jobs and stimulate economic growth in various sectors, especially in emerging economies.
“India is well tuned into recovering the utility and economic value of discarded and/or dysfunctional manufactured products and components. This has traditionally been driven by need or scarcity, and an acceptance by markets that recovered products will have lower performance.

Remanufacturing de facto industrializes this practice by designing products for multiple lifecycles and ensures equal if not superior performance of recovered components and products compared to new ones. This can make good business sense and help the transition to a circular economy in India.”

Dr. René Van Berkel
India Representative
United Nations Industrial Development Organization

“I am pleased to see Re:CREATe bring remanufacturing knowledge to India and look forward to our working together.”

David Fitzsimons
Director
Conseil Européen de Remanufacture

“With remanufacturing rapidly growing into a major business opportunity, greater consideration will need to be paid towards the potential reuse of the parts and components used in products.

This report highlights how circularity and sustainability as concepts are gaining traction in India’s manufacturing landscape, while also serving as a handbook on reman for the uninitiated.”

Anirban Ghosh
Chief Sustainability Officer
Mahindra Group
Our Work: Projects

Project Sponsor

- From December 2021 – March 2022, Re:CREATe participated in the ‘Build UK India – Net Zero Program’ run by UK-based technology accelerator Digital Catapult

Project Partner

- Re:CREATe partnered with UK-based technology startup Remade Group for the program
- Remade Group has developed an innovative trading platform which will be Europe’s first online marketplace for remanufactured goods providing customers with ethical, environmentally friendly products that come with quality levels and warranty that match those of new products. They use distributed ledger technology to verify the history of products, which will retail at 40% below new value with up to 80% saving in energy costs

Project Goal

- Develop the business case for the platform in India and pilot-test the platform in India
- Re:CREATe supported Remade Group with understanding the business environment in India, and connecting with businesses and stakeholders in India
Recognition

• In December 2020, Re:CREATe received the ‘Remanufacturer of the Year’ (RotY) Award, in the ‘Best Reman Ambassador’ category.

• As of June 2022 Re:CREATe is the:
  • Only Indian company, and
  • Youngest company ever
  to have received this prestigious global award

Founded in 2005, these global awards are given to a person or business that has served remanufacturing with particular distinction. Over its lifetime the award has celebrated the achievements of some of the reman industry’s preeminent names. Within the industry it is considered a major accolade.

Website: https://www.rematec.com/amsterdam/roty-awards/
To learn more about us and our work, please visit our website at www.recreateindia.org or email us at info@recreateindia.org

Thank you for your time and attention.