

Abstracts

【Special Issues: Repair and Reuse toward the Circular Economy】

1. An Overview of Repair Behaviours and Policies in Japan: Special Feature Introduction on Repair and Reuse toward the Circular Economy

Hajime Yamakawa

Graduate School of Life and Environmental Science, Kyoto Prefectural University
(1-5 Shimogamo-hangi-cho, Sakyo-ku, Kyoto 606-8522 Japan)

Abstract

In the context of climate change and resource constraints, realizing a circular economy has emerged as a significant challenge. Prolonging the lifespan of products is essential for achieving this goal. Recently, the 'Right to Repair' has attracted attention, particularly in Europe and America. This paper provides an overview of the background that led to the Special Feature on the topic of Repair and Reuse in this Journal and provides a summary of each article found in the publication. Based on previous studies, this paper identifies barriers to repair and potential measures to address these issues. The paper also reports survey results on the repair status of various products such as electronics, information technology devices, clothing, household goods, and furniture among Japanese consumers, including reasons why products were not or could not be repaired. Major reasons include a lack of available parts/materials, insufficient manufacturer support for repairs, and the prohibitive cost of repairs. Additionally, this paper outlines Japan's policies related to repairs, including The Act on the Promotion of Effective Utilization of Resources, The Fair Competition Code, The Liability for Non-conformity of Goods in the Civil Code, and The Act on Promoting Green Purchasing.

Keywords: state of repair, barriers against repair, repair policies, spare parts, waste Prevention

2. Current Status, Challenges, and Prospects on the Right to Repair in Asia

Michikazu Kojima

Institute of Developing Economies, JETRO

(Wakaba 3-2-2, Mihama-ku, Chiba 261-8545 Japan)

Abstract

In response to initiatives surrounding the *Right to Repair* in Europe and the United States, interest in the *Right to Repair* has increased in Asian countries, with some governments now incorporating the concept into laws and regulations, as well as providing information to the public about the *Right to Repair*. This paper provides an overview of *Right to Repair* initiatives being undertaken in Asian countries. For example, China, the Republic of Korea, and India have already instigated some activities for *Right to Repair* through new regulations or through hosting internet portals managed by the concerned government ministries. In addition, the possibility that long-term use of *Right to Repair* may hinder or delay diffusion of energy-saving products is also discussed in the paper. In Asia, there have been a number of import issues related to secondhand goods and waste materials, hindering the import of goods and parts for repairs.

Keywords: the Right to Repair, Asia, refurbish, energy efficiency

3. Repair Measures and Related Initiatives for Circular Economy Policies in Europe

Chika Aoki-Suzuki

Sustainable Consumption and Production Area, Institute for Global Environmental Strategies
(2108-11 Kamiyamaguchi, Hayama, Kanagawa 240-0115 Japan)

Abstract

Along with summarizing the various measures and initiatives regarding repair in the EU and some European countries, this paper also discusses the gaps found between barriers to repair and policies to further promote business and behavior surrounding repair.

The major repair measures include product requirements on reparability, disclosure of reparability information and improving access to repair, prohibition of repair sabotage, extension of warranty periods through repair, disseminating information on repairers, and subsidies for repair costs. It can be said that a systematic repair policy framework is being established through various measures. These measures are also expected to address technical and economic factors such as product design and the spare parts availability and repair which could change consumer behavior by providing information.

In Japan, although some efforts on repair have been implemented, there is room for improvement in repair business and behavior, and it is desirable to expand repair measures with consideration to policy development in other countries.

Keywords: resource efficiency, circular economy, right to repair, eco-design, product sustainability information

4. "Right to Repair" Policies in the United States: History and Current Status

Yo W. Shiina

Attorney-at-law in the states of New York and New Jersey, the United States of America

† Correspondence should be addressed to Hajime Yamakawa (Editorial Committee Member in Charge):

Graduate School of Life and Environmental Science, Kyoto Prefectural University

(1-5 Shimogamo-hangi-cho, Sakyo-ku, Kyoto 606-8522 Japan)

Abstract

Discussion on the "Right to Repair" have seen a substantive rise in this century on the federal and state levels in the United States. This concept purports to provide the legal right for the buyer (owners) and independent repair providers to access the information, tools, and parts necessary for repair and maintenance of products regarding which the buyer/owner has the legal claim of possession or use. This article summarizes the historical context and the legal foundations (e.g., antitrust, consumer protection, and IP laws) supporting the resurgence of the *Right to Repair* movement in the current age of digitization, and illustrates how various stakeholders, including the legislative, executive, and judicial branches of government, as well as the private sector such as consumers and repair providers, have contributed to this renewed movement.

Keywords: Right to Repair, competition, consumer protection, intellectual property, policy

5. iFixit's Work to Reclaim the Right to Repair

Elizabeth Chamberlain* and Kyle Wiens*

* iFixit

† Correspondence should be addressed to Elizabeth Chamberlain: and Midori Doi (for Japanese)

iFixit

(1330 Monterey St. San Luis Obispo, CA 93401 U.S.A.)

Abstract

iFixit has been pushing for more-repairable electronics for over 20 years, since its founding at a university in California. The company started as a website with step-by-step instructions for how to repair Apple products; it has evolved into a global repair advocacy powerhouse, supporting repair-friendly legislation around the world and working with manufacturers including Google and Lenovo to make their products more repairable. This article summarizes iFixit's history, describes the growth of the global *Right to Repair* movement (including legislative victories in the US, EU, and Asia), and charts some of the remaining frontiers of repair advocacy.

Keywords: right to repair, repairability, electronics, circular economy

6. Initiatives of the Ricoh Group to Realize a Circular Economy, including MFP/Printer Reuse and Recycling Business

Takako Satoh

ESG Center, ESG Strategy Division, Ricoh Company, Ltd.

(3-6 Nakamagome 1-chome, Ota-ku, Tokyo 143-8555 Japan)

Abstract

In recent years, the transition to a circular economy has become a commonly recognized global issue, on top of the climate change crisis. In order to continue to utilize limited resources into the future it is essential to enable efficient and sustainable use of natural resources. In light of this, a shift from ownership to use-and-disposal to circulation is accelerating. In 1994, as a way to work toward realizing a circular economy, Ricoh Group established Comet Circle™ as a concept for realizing a circular economy and has long been promoting the effective use of resources throughout the full lifecycle of products.

This paper introduces Key Performance Indicator (KPI) and targets for realizing a circular economy. As a specific initiative, it focuses on the company's product remanufacturing and parts remanufacturing business for Multifunction Printer (MFP) and printers. Carbon Foot Print (CFP) reduction of remanufactured MFP, Ricoh Group's repair infrastructure, and its process for the MFP and Printer, is also introduced.

Keywords: circular economy, 3R (reduce, reuse and recycle), reuse and recycling businesses, carbon foot print, repair

7. Reform and Repair Company in Practice: The Case of Believe Co., Ltd.

Yasuyuki Takasu

Believe Co., Ltd.

(49-2 Oyama-cho, Itabashi-ku, Tokyo 173-0023 Japan)

Abstract

Based on three repair stores currently operated by the author, this report describes what type of repairs are in high demand, the status of users, and changing repair needs before and after the COVID-19 pandemic. Prior to COVID-19, there were a lot of requests for repairs on expensive clothing such as wedding and funeral dress, men's leather shoes, and women's stilettos. Following the COVID-19 outbreak, however, these types of repairs were seen to decrease drastically. It is thought that changes in the mindset of the elderly along with an increased trend toward remote working may have had an impact. While this demand, which fell sharply after COVID-19, seems to be gradually improving, recovery of the number of elderly customers still lags behind. In response, the company established by the author has launched a service that caters to elderly care facilities and private homes, making rounds to offer repair services. In the future, the company plans to respond to other support needs as well, making this a business that will not only uncover a demand for repairs but also contribute to ensuring the safety and security of the elderly. The author states that "Communication is important when it comes to repair services", and that "future issues will include passing on skills to the next generation and improving management".

Keywords: renovation and repair, remaking, transmission of techniques, impact of COVID-19, elderly

8. Waste Disposal Facilities Raise Awareness through Repair and Reuse Efforts

Atsuko Hanashima^{*}, Eiichi Suzuki^{**}, Hiro Higashi^{***, ****}, Kyoko Ejiri^{*****}, Miho Takane^{*****}, Yoshichika Yanagi^{*****} and Tadashi Sekino^{*****}

* Faculty of Design Technology, Osaka Sangyo University

** Environmental Educational Facility Research Group, Japan Society of Material Cycles and Waste Management (JSMCWM)

*** Sapporo Recycle Plaza

**** Nonprofit Corporation Kankyo Re·friends

***** Tama New Town Environmental Association Recycling Center

***** Nonprofit Organization Ecolifehamamatsu

***** Sustaina Kyoto (Environmental Education Facility, Kyoto South Clean Center)

***** Kunisaki Clean Center Yumehotaru

† Correspondence should be addressed to Atsuko Hanashima:

Faculty of Design Technology, Osaka Sangyo University

(3-1-1 Nakagaito, Daito shi, Osaka 574-8530 Japan)

Abstract

There are many facilities engaged in repair and reuse to raise awareness about the issue of waste. This initiative began with the establishment of a 'recycling corner' at a waste incineration plant and later spread nationwide with the start of what is called 'recycling plazas' that were funded through government support. Repair and reuse could cover all types of things, including: furniture, bicycles, clothes, books, tableware, toys, umbrellas, and home appliances. The overall trend, however, is now shrinking, which is thought to be due to the low quality of furniture and other items currently being manufactured. From reports on facilities around the country, it has been found that attachment, origin, and the quality of items may drive future repairs and reuse.

Keywords: environmental education facilities operated by municipalities, repair, reuse