

TIERRA^{plus}+

HITACHI

Reliable solutions

Tierra Plus
Number 134

This page is the English version of a special issue in TIERRA+, an information magazine published by Hitachi Construction Machinery for the Japanese market.

Hitachi Construction Machinery
PREMIUM RENTAL

ZW18



[Special Issue]

Front Line of Rentals

From Owning to Renting

Hitachi Construction Machinery
PREMIUM USED



Hitachi Construction Machinery
PREMIUM RENTAL



Hitachi Construction Machinery Group



Rental Daisuke

Resale Masashi

Front Line of Rentals

From Owning to Renting

To contribute
to a circular
economy!

Only
What and When
Needed

Hitachi Construction Machinery
PREMIUM RENTAL

The trend in personal consumption has been changing from "owning to renting," as exemplified by car sharing, whether corporate or privately owned, or by services, such as sharing empty rooms as accommodations for tourists. The same is true of construction machinery. We are seeing a shift from ownership to rentals due to the changing needs of construction sites and for reducing costs. Our experts in charge of the rental business for Hitachi Construction Machinery, namely "Rental Daisuke" and "Resale Masashi" have provided reports on the state of construction machinery rentals and the merits of using them, all under the motto of "increasing customer satisfaction with our rental solutions."

Text: Toshiaki Saito Illustrations: Kayo Honda Photographs (portraits): Norio Sekine



Using the Machinery Only When You Need It: The Growing Global Rental Market for Construction Machinery Today

The rental market for construction machinery is growing worldwide. Behind this trend is both the need for cost reduction and more flexibility, and as an approach to a sustainable circular economy. We'll focus on the efforts of Hitachi Construction Machinery, which is developing our rental business globally.

Good Outlook for the Rental Market Room for Growth in Emerging Countries

The rental business for construction machinery is expanding, mainly in developed countries like Japan, Europe and North America. According to a survey of Hitachi Construction Machinery, the market had reached some 2.9 trillion yen in Europe, about 4.9 trillion yen in North America and about 1.4 trillion yen in Japan in 2018, so the estimated market size exceeds 10 trillion yen. Over the past 30 years, the ratio of deployment to rental companies out of all construction machinery has increased to about 50% in developed countries. Recently the market has seen rapid growth in China as well, and if the rental ratio in emerging countries like China, India and Southeast Asia rises to the level of developed countries in the next 30 years, the market is expected to grow to some 30 trillion yen.

Mr. Ohwada of the Used Equipment & Rental Business Planning Dept. commented on some of the background to the development in construction machinery rentals to date.

He said, "In developed countries, there are a lot of short-term jobs in urban construction and it can be difficult to secure year-round work, such as large-scale civil engineering. Since construction machinery is not operated heavily in the region, the trend has shifted to rentals as they can be used only when needed and

financially efficient. Exhaust gas regulations are getting stricter year by year, especially in Europe, so the latest models of construction machinery have a high turnover. However, it is not practical to replace machines frequently, so the number of customers who prefer rentals has increased."

Similarly, renting has proliferated in the United States due to its great land mass and the consequent high cost of transporting machinery. In recent years, sharing services that allow online reservations, applications and payment for construction machinery have begun to spread and they are likely to expand going forward.

On the other hand, what is the situation in emerging countries like? Mr. Inoue of the Used Equipment & Rental Business Planning Dept. addressed that questions as follows. "Currently, the trend toward long-term rentals is common in emerging countries. Rentals in developed countries tend to take the form of dry rentals for which only the machine is rented. By contrast, wet rentals are the norm in emerging countries, as operator skill is not as well developed. We anticipate the demand for wet rentals to increase all the more in line with increases in population and construction work in emerging countries."



AKA
Resale Masashi



Masashi Ohwada
Manager
Used Equipment & Rental
Business Planning Dept.
Marketing Group

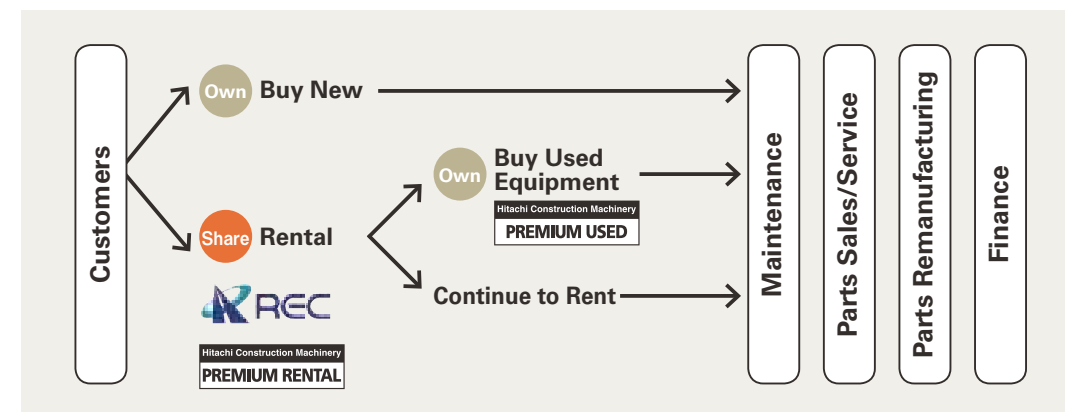
AKA
Rental Daisuke



Daisuke Inoue
Used Equipment & Rental
Business Planning Dept.
Marketing Group



Providing Optimal Solutions to Customers via Rentals



Providing Services Only a Maker with Excellent Maintenance Can Offer

In anticipation of such demand, Hitachi Construction Machinery started its rental business in 1996. It was rolled out as the REC brand in Japan and has grown in tandem with its customers. Next, in order to get serious about the rental business overseas, we established a new company called Synergy Hire Ltd. in the UK. We formed a group with the ACME Lift Company in the U.S. to fortify the rental business there.

In addition, Hitachi Construction Machinery (Europe) has been developing the Premium Rental brand since

2017. After meeting certain standards set by the Hitachi Construction Machinery Group, group companies and authorized dealers can become rental asset holders, and perform rental operations directly and indirectly, as well as machine maintenance. After rental operation, machines are resold as "Premium Used" (used equipment with warranty) under the same kind of logo as "Premium Rental."

Mr. Inoue said, "Trial rentals are a valuable point of contact with customers who have no contact with new ma-

chine sales per se." Mr. Ohwada explained focusing on the rental business as follows. "Selling relatively-new used equipment after the rental period that has been well-maintained is linked to the value chain, including parts recycling and finance. It allows us to provide our customers with a wide range of solutions and services. At the same time, we aim to contribute to global environmental measures in terms of extending the life cycle of each machine and consequently the life of the product."

Spreading Hitachi Construction Machinery Rentals Around the Globe

Europe High Demand for Replacing Attachments

Hitachi Construction Machinery (Europe) provides rental to customers via authorized dealers. As they need not purchase machinery, rental business is expanding among the authorized dealers. There is a great demand for using quick hitches, which simplify the mounting of attachments.

Hitachi Construction Machinery
PREMIUM RENTAL

UK Synergy Hire Deals Directly with Customers

In the UK, where the percentage of rentals reaches 57%, Synergy Hire started its business in May 2019 and rents directly to customers. It mostly rents out hydraulic excavators and mini-excavators.

Synergy

Africa and Southeast Asia Demand for Diverse Machines—Small, Medium & Large

In Southeast Asia, rentals are mostly for small or medium-sized construction machinery, but Indonesia and Africa also require large hydraulic excavators and dump trucks for mining. And in Thailand agricultural sites also need wheel loaders.

We offer a wide range of products around the world, with a focus on medium-sized hydraulic excavators, mini-excavators and wheel loaders. The proportion of mini-excavators used in urban construction is high in developed countries, and they are often resold as used equipment after short-term rentals in Europe and North America.



China Expectations for Future Business in Rapidly Growing Markets

The China market is growing rapidly and is positioned somewhere between developed and emerging countries. At present, it is common to purchase new machines, but in many cases rentals of Hitachi Construction Machinery lead to purchasing of new machines.



U.S. Teaming Up with ACME Fortifies our Presence

Given the size of the country, rental businesses of construction machinery in the U.S. are common. ACME had primarily focused on handling aerial work platforms, but filled out its lineup with Hitachi Construction Machinery products, like hydraulic excavators and wheel loaders. They provide rental products to their customers via large companies that rent machinery in a wide area.

ACME

Japan Offering a Full Lineup, from Small Items to Heavy Equipment

We are developing the business of renting directly to customers under the REC brand. To meet the wide range of needs on customer construction sites, we aim to rent everything on-site, including other brands.

REC

Australia Rental of Mining- Related Products Expanding

Most rentals are to the major rental company Delta Rent. In addition to that, mining products are also increasing. The Oceania region sees more dry rentals, but wet rentals with operators also occur.

In addition to frequent and large-scale development projects in emerging countries, the breadth of the land results primarily in long-term rentals. Another characteristic is that the majority of rental type is wet rental due to lack of skilled operators.





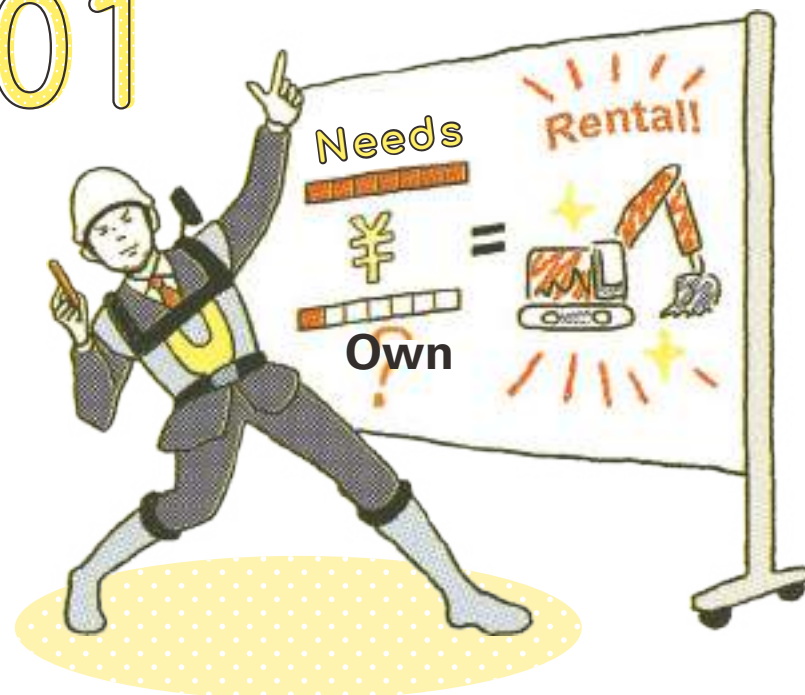
5 Merits of Renting Construction Machinery

The rental of construction machinery offers the advantage of not only meeting customer needs, but also creating value for Hitachi Construction Machinery and for the whole world. Let's look at the 5 merits of rentals here.

Merit 01

Only the Quantity Needed, When Needed: For Lean Management

The biggest advantage of renting construction machinery from the customer's perspective is the ability to rent only the quantity you need when necessary. Owning construction machinery entails acquisition costs, plus facility, equipment and personnel costs for storage and repairs. As renting does not require such costs, it helps streamline management and offers freedom to try the latest features. Mr. Ohwada points out, "Since you don't own assets, you don't incur interest rates or property taxes, and can make office work more efficient, by reducing calculations, such as depreciation. Another major advantage is that rental fees can be added into construction costs."



Merit 02



Using Well-maintained Machinery = Peace of Mind

When a company owns its own construction machinery, proper repairs and maintenance become an issue. By contrast, when a rental of Hitachi Construction Machinery is used, the high quality and original machine performance is maintained via the excellent repairs and maintenance only a specialist from the manufacturer can provide. In addition, Hitachi Construction Machinery also offers proprietary services, such as Global e-Service, for collectively managing the operating status of machines, and ConSite, which contributes to the stable and efficient operation of machines by sending reports and alerts about their operating status. Using the IoT allows us to manage construction machinery in their proper conditions. We would like to emphasize the merit of peace of mind when using rentals of Hitachi Construction Machinery thanks to these services.



Merit 03

Easy to Use the Latest ICT Construction Machinery and Application Products

Mr. Ohwada says, "It is advantageous to try products that would be expensive to buy, including the latest models, such as ICT construction machinery, or hybrid machines that meet exhaust regulations, and application products, such as those developed for special purposes." Obviously, you cannot determine whether the latest features will meet your needs without actually trying them out. Renting construction machinery and using it on an actual construction site allows you to match the construction machinery that is appropriate to your work. Rentals also allow you to arrange construction machinery to meet conditions like ICT construction machinery requirements when bidding on jobs, or when a joint venture (JV) will be dissolved after completing construction. Additionally, rentals provide freedom in selecting the attachments to mount on machines to meet one's needs.



Merit 04



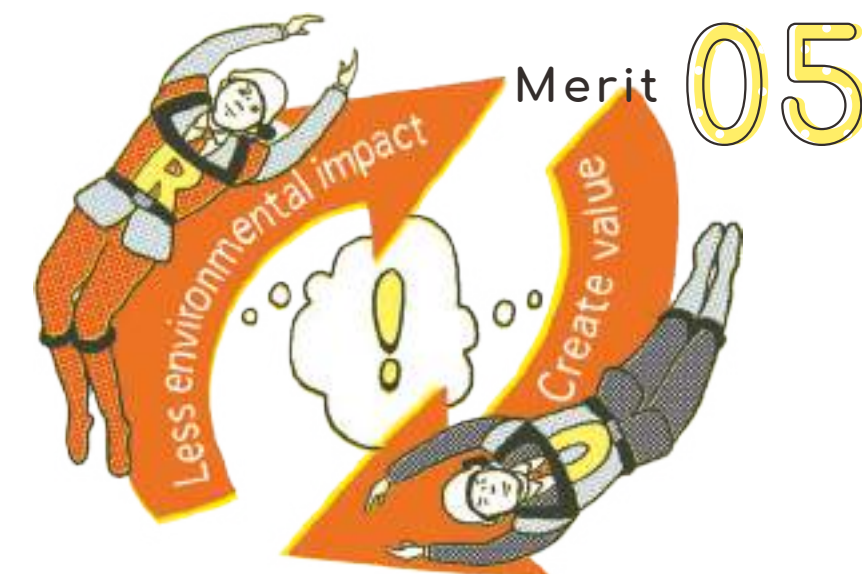
After Rental, Providing High Quality Used Equipment to Customers Around the World

Hitachi Construction Machinery is in the unique position of being able to supply well-maintained machines that have been rented as new for 1 to 3 or 4 years as high-quality used equipment. This can be expected to raise the bar in the used equipment market, which is also beneficial for customers looking for used equipment. Of course from Hitachi Construction Machinery's perspective, "It gives us a chance to engage with customers who haven't had contact with conventional new machine sales and after-sales services. We want to link this to creating added value for our customers by providing solutions throughout the entire value chain," says Mr. Inoue. Used equipment with warranty that hits the market after being used as rentals under the maintenance of Hitachi Construction Machinery has an excellent reputation and the demand is strong.



Seeking to Add Value and Solve Environmental Issues via Product Life Cycling

Sending machines to the used equipment market after their rental life extends their overall life cycle. Mr. Ohwada says, "We provide proper maintenance for used equipment and utilize remanufactured parts as well, so the construction machinery can lead a 2nd life. We believe that using resources effectively and reducing the environmental impact of products contributes to the circular economy and SDGs (sustainable development goals), which are commanding attention worldwide." In addition, putting a lot of rental machines on the market like this will allow us to analyze data, such as how they are used, and then use it in developing subsequent products.



Merit 05



Switching from Owning to Using Leverages the Power of Resource Recycling

What Is a Circular Economy that Leads to a Competitive Advantage?

Hitachi Construction Machinery sees promoting the rental business as contributing to the circular economy.

We asked professor Yasushi Umeda of the Graduate School of Engineering at the University of Tokyo, who specializes in life-cycle engineering, about trends in the circular economy and efforts to promote it.

What is this circular economy that everyone is talking about?

In contrast with a conventional linear economy, which uses a lot of resources to make and dispose of products, a circular economy is a system that circulates resources and creates value, as well as turning the wheels of the economy. Assumptions from the very design stage of a product include reusing resources and suppressing the generation of waste.



Unlike Conventional 3R, Circulating Resources and Economic Growth are Linked

The notion of a recycling-oriented society debuted in the 1990s and the 3R initiative (Reduce, Reuse, Recycle) got started in Japan. Since then, the Ellen MacArthur Foundation (HQ in UK) was established in 2010 to promote the circular economy. In 2015 the EU (European Union) announced a policy package that showed the direction to a circular economy. This resulted in a quantum leap in the attention paid to the circular economy around the world. The biggest difference from a 3R society is that we aim to create an economic system that links the strengthening of industrial competitiveness while ensuring employment under the premise of recycling resources.

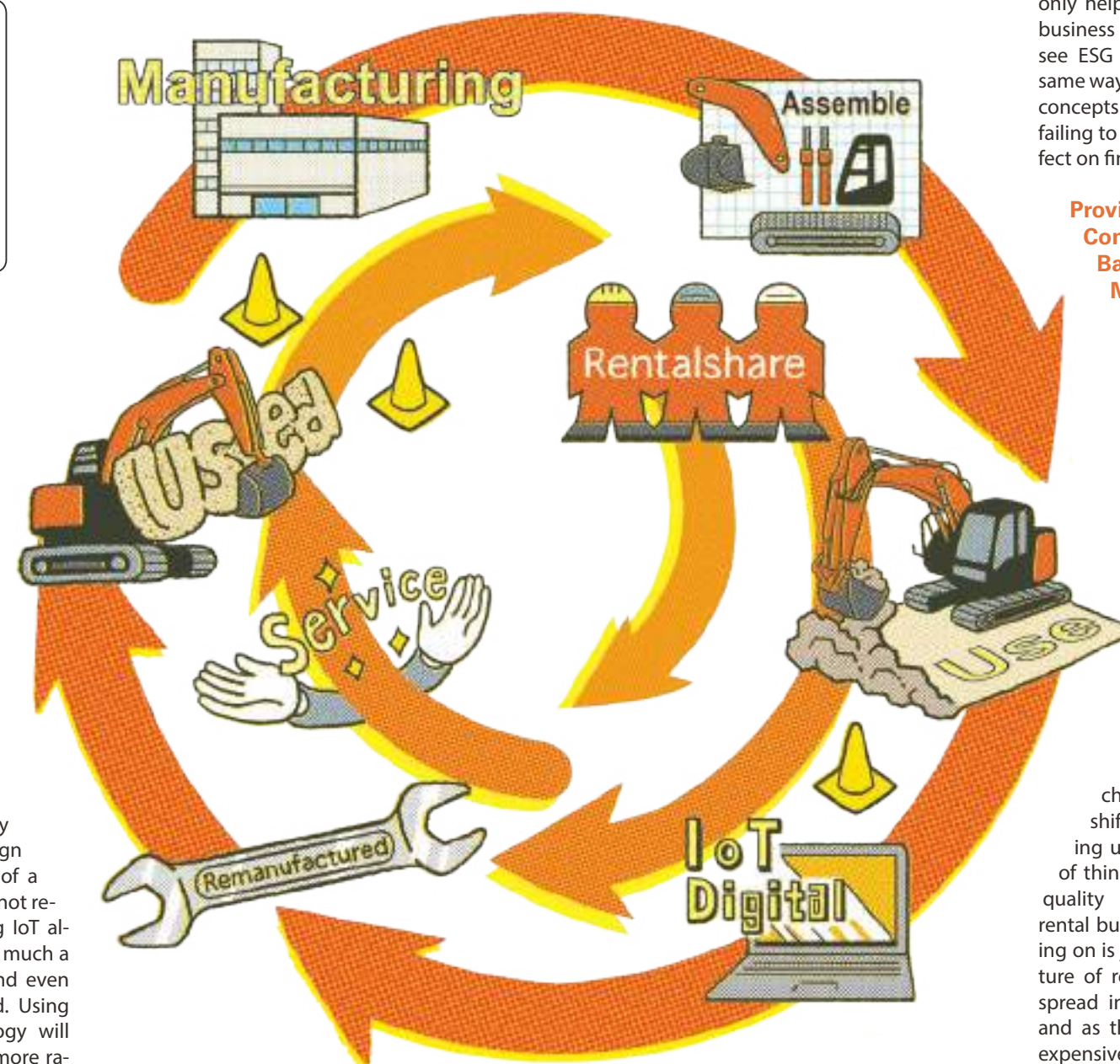
In the manufacturing industry, the main idea was "selling out of products," or making, using and disposing of mass quantities of things. However, our sense of this changed upon close observation of how people value "ownership." Conventionally, the idea is that products realize their greatest value at the point they are purchased. By contrast, the effort to produce value throughout, not just at the point of purchase, but including during and

even after use, that is the concept at the core of life cycle engineering that I study, and is key to a circular economy. In other words, it means designing products with a long life in mind, being aware from the outset of maintenance, updates, and reusing the product after its use. Unfortunately, however, the fact is the concept has not yet fully penetrated the manufacturing industry.

Of course, the maker may tend to think that the design cost to ensure full recycling of a product may be a waste if it is not recycled. That said, today using IoT allows us to check data on how much a product was actually used and even whether it could be recycled. Using this kind of digital technology will make it possible to design a more rational product life cycle.

Working Toward a Circular Economy Also Helps Avoid Risk and Create Business

The EU is moving forward with standardization and legislation on the



circular economy. Examples of what this includes are specific guidelines at the design stage to make products suitable for the circular economy, such as making them easy to disassemble, and making it possible to update to the latest firmware. These are the kind of efforts the EU is pursuing, but if Japanese companies fail to respond to them, it may result in barriers to entering the EU market. The concepts of the EU are expected to spread around the world, so taking steps now will not only help avoid risk but also lead to business opportunities. Further, we see ESG investment growing in the same way and likely to incorporate the concepts of the circular economy, so failing to respond is apt to have an effect on finance and procurement.

Providing Total Value by Connecting to Customers Based on High Quality Manufacturing

In the first instance, a circular economy cannot be established unless quality goods are produced. Japanese manufacturers have a strong tendency to emphasize the manufacture of goods with excellent quality and this foundation is important. That said, the time has come to look at the life of a product, not being done with it once it's sold, and shift to the idea of long-term support.

In this sense, I feel Hitachi Construction Machinery is shifting to the direction of taking up the circular economy way of thinking, in addition to creating quality products themselves. The rental business the company is working on is just one of these. As the culture of renting and leasing is widespread in the construction industry, and as the products themselves are expensive, coming up with ways to get products used for a long time is an easy task, especially from the perspectives of maintenance and recycling parts.

So what ends up being the key to it is digital technologies. By using IoT and AI to collect and analyze machine operation data and providing the

maintenance in the best form for the customer, the company expects to reduce life cycle costs as well as providing new value, which will lead to recycling of resources.

The most important point is that the supply side and the customer can be linked by making these products into services, including rentals. From the manufacturer's perspective, Hitachi can provide detailed support via this connection and get to know its customers by collecting their operating data, which can then be used in developing and putting out new products and services.

If the company does a good job of linking product development and technological capabilities, it can make the total value more appealing and make existing strengths all the stronger. And if the company can contribute to the environment by working with its customers to extend the life of its products, it will produce the best possible outcome—wins for the customer, for the company, and for the world.



Yasushi Umeda

Professor
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After working as an assistant professor in the Department of Mechanical Engineering, Graduate School of Engineering, Tokyo Metropolitan University, and as a professor in the Department of Mechanical Engineering, Graduate School of Engineering, Osaka University, he has been in his current post since 2014. His specialties include life cycle engineering and life cycle design. He is the chief researcher of the 21st Century Public Policy Institute. Publisher of books on the topic of circular economies (available only in Japanese).