

# Digitalization to trigger changes in Japan's construction and real estate sectors

Long before the onslaught of coronavirus, Japan's real estate market was characterized as steady, stable, and reliable, and industry insiders remain optimistic about the post-pandemic future, as the sector continues to show its resilience in the face of the pandemic.

While Japan's real estate market has traditionally been dominated by domestic buyers, the ratio of foreign entities making direct investments has nearly doubled in two years. Today, 38% of real estate in Japan comes from foreign investors, compared to just 21% in 2019, with overseas investors attracted by the country's stable governance, low initial cost of purchase, attractive investment yield, and diversified real estate offerings. Naturally Tokyo and Osaka have been the most popular destinations for foreign funds. One of the most profitable, yet affordable major cities in the world, Tokyo is poised to become the real estate capital of Asia. And while Japan's aging population is shrinking overall, that is not the case in the Japanese capital, where new residents continue to flock from across the country, pushing up demand for housing, office space and other commercial and public amenities.

"The influx of population growth in the urban cities of Japan is primarily due to young adults' attraction to the urban lifestyle. We have been observing a shift in movement from country-side to central Tokyo," says Yoshinobu Takahashi, president of real estate firm RBM. "Tokyo and Osaka are desirable to live in because of easy access to high-quality education, medical care, beauty amenities, and other entertainment facilities. When an area becomes more convenient, more people come to live and work there, and there will be more demand for real estate in both the office and residential markets."

Over its 30-year history, RBM has been involved in several landmark projects in Tokyo, with its latest being a commercial development in the capital's prestigious Ginza district. "The RBM Ginza high-rise office building is a milestone for our 30-year-old company," says Mr. Takahashi, who also discusses RBM's investments in the U.S. "We are currently promoting office and residential business in Los Angeles and we aspire to expand our

business throughout the U.S.," he reveals. "Our company's ability to apply Japanese best practices to the American market is what sets us apart from local U.S. competitors. With experience building over 35 high rise multi-family complexes and 17 office buildings in the Tokyo metropolitan area, our team understands the challenges of optimizing limited space. We will continue to invest in both Japan and America because we are eager to be a part of such promising real estate markets."

Japan's real estate market also holds promise beyond the two main urban centers of Tokyo and Osaka. Okura is one company contributing to regional revitalization, with its project portfolio spanning regions such as the Hyogo, Mie, and Wakayama prefectures. One solution to address Japan's aging and shrinking demographic, says Okura CEO Shizuo Kiyotaki, is to attract more foreigners to live in the country, and not just to Tokyo and Osaka. "Therefore we must focus on creating an attractive environment and gaining recognition as an easy-to-live destination for foreigners. Foreigners tend to prefer to stay in places closer to nature, which is why we are focusing on the revitalization of rural and countryside areas."

Aside from regional revitalization, Mr. Kiyotaki is also passionate about technology. Okura is focusing heavily on IoT and 5G-based solutions for homes and hotels as it looks to form part of the smart city revolution, an area in which Japan is leading the world, according to Koji Omura, president of Apaman, a real estate, IT and sharing economy specialist that operates the 'fabbit' chain of coworking spaces. "I think that smart cities are Japan's strongest point," he says. "China and the U.S. are more advanced when it comes to individual projects, but I think Japan excels when it comes to smart cities. Toyota Motor Corporation's Smart City and Fukuoka City's initiatives are well known in Japan. Japan is also good at using a variety of IT technologies for the movement of entire towns, and we are also cooperating with the government."

Japanese companies now see digital transformation (DX) as a way to create new business models or modify existing ones by taking advantage of new digital technologies.

And many firms in the real estate and construction sectors are leading the pack. "The country as a whole has realized the importance of accelerating DX. As Japan moves towards further digitization, this is a great opportunity for our company," says Noboru Okubo, President and CEO of Uchida Yoko, which has worked with a diverse range of public and private sector clients on a variety of different projects, including ICT and environmental solutions for schools, offices and governmental facilities.

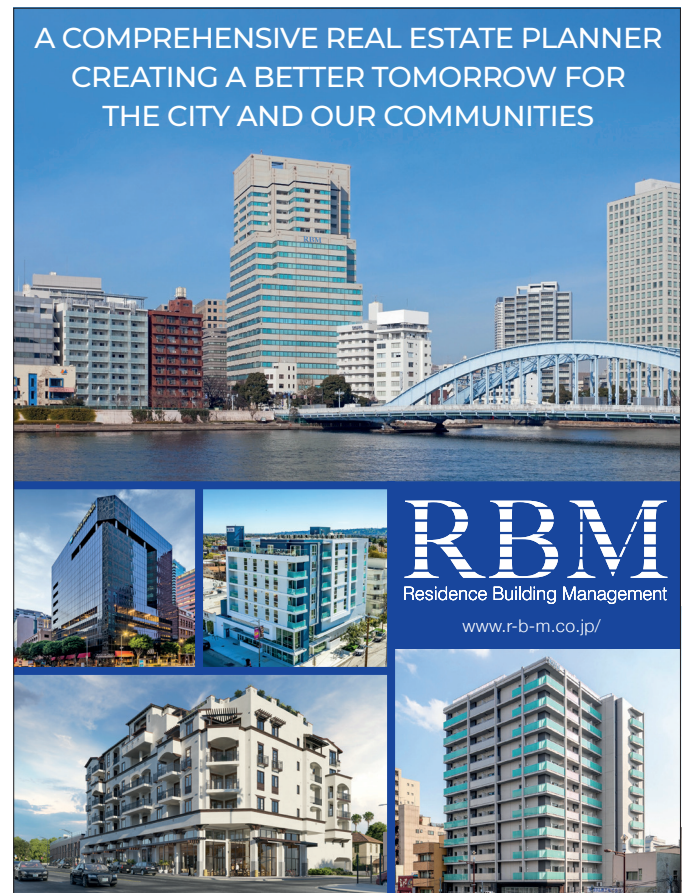
Giving his take, Tatsuro Ono, president of Onocom, says: "The possibilities are endless for DX conversion at construction sites. Companies that utilize DX in their projects have the added benefit of data management. They can continuously run and sustain their projects based on collected data after construction is completed."

"Japan's Ministry of Land, Infrastructure, Transport and Tourism has created a DX initiative called PLATEAU. This is a 3D scanning

project for the entire Tokyo area that aims to convert it into digital data, from city level to building level," he adds. "Onocom not only provides data for the 3D recreation of buildings, but we also upload data into the cloud so people can access it easily. We call it the 'Digital Twin'."

Like Onocom, Semba Corporation has also leveraged BIM (building information modeling) to enhance its business. "The utilization of BIM will increase in Japan, so we want to become the leading company in this field," says Daisuke Yashima, the company's president and CEO. BIM forms one of 12 "Tactics" under Semba's DX strategy, which Mr. Yashima sees as crucial to Semba's vision to become a "Good Ethical Company". "For us to achieve that, we understand we must undergo DX. We are part of the construction industry, where sometimes there's a lot of overwork happening. That is something we must improve because it's not ethical, and we can do that with the help of DX."

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# Apaman: The real estate and IT specialist that is supporting startups



"Real estate is an information industry, so I think it's the most suitable industry for IT because it doesn't manufacture anything. I believe more than 90% of what we are doing now will be automated."

**Koji Omura,**  
President, Apaman

Both online and at its wide network of branches, Apaman provides a leading platform for locat-

**Apaman has used its expertise in IT to become a leader in real estate services, and helps startups to succeed.**

ing rental properties in Japan and a host of other countries in Asia – and its expertise in IT is central to its success in real estate.



Entrance to fabbit in Otemachi, Tokyo's business center

"Real estate = IT in my mind," says Apaman President Koji Omura, whose company applies cutting-edge cloud technology and artificial intelligence to find just the right home for its customers. "Real estate is an information industry, so I think it's the most suitable industry for IT, because it doesn't manufacture anything. I believe more than

90% of what we are doing now will be automated."

In a bid to cater to a wider range of its clients' needs, Apaman has also branched out into other lines of business related to real estate, such as property management, insurance and energy. "In a customer survey, we



Lockers are available with additional options. Users are also free to read books on establishment and management found that the most important thing they want is a one-stop service," Mr. Omura explains.



A calm and simple interior, with large windows

Meanwhile, Apaman's sharing economy services include its fabbit coworking spaces, which are run in collaboration with the company SystemSoft and offer comprehensive support to startups. "It's completely different from other coworking spaces," Mr. Omura says of fabbit, which Apaman aims to expand to around 500 locations worldwide. "It's a school for innovation."

**APAMAN**  
apamanshop-hd.co.jp/en/

# Future learning is now a reality

Uchida Yoko was originally established to provide high-quality measuring and engineering equipment 112 years ago. Today the company's main focus comes in the shape of educational, government, and enterprise environment creation and ICT systems.



FutureClassRoom, the latest ICT classroom being introduced to elementary and junior high schools in Japan.



"We are transforming the Japanese classroom through ICT transformation."

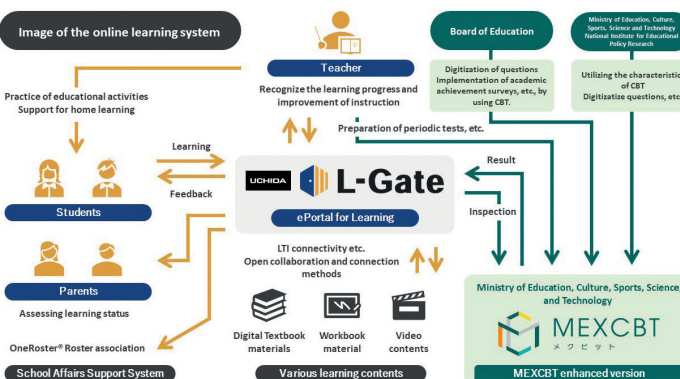
**Noboru Okubo,**  
President and CEO,  
UCHIDA YOKO CO., LTD.



Full-cloud educational ICT environment in Konosu City, Saitama Pref. (Mayor, Kazuhisa Haraguchi)

In 1998, Uchida Yoko established the Uchida Yoko Institute for Education Research in an attempt to research the burgeoning field of digital learning. In 2008, the firm then started to examine the learning effects of using one PC per child in a classroom setting. Having seen potential in the findings, Uchida Yoko is now expanding on the Future Classroom and its concepts, digital textbooks and Online Learning Analytics/computer-based testing.

Uchida Yoko supported the implementation of The Giga School initiative, which was led by the Japanese government. The com-



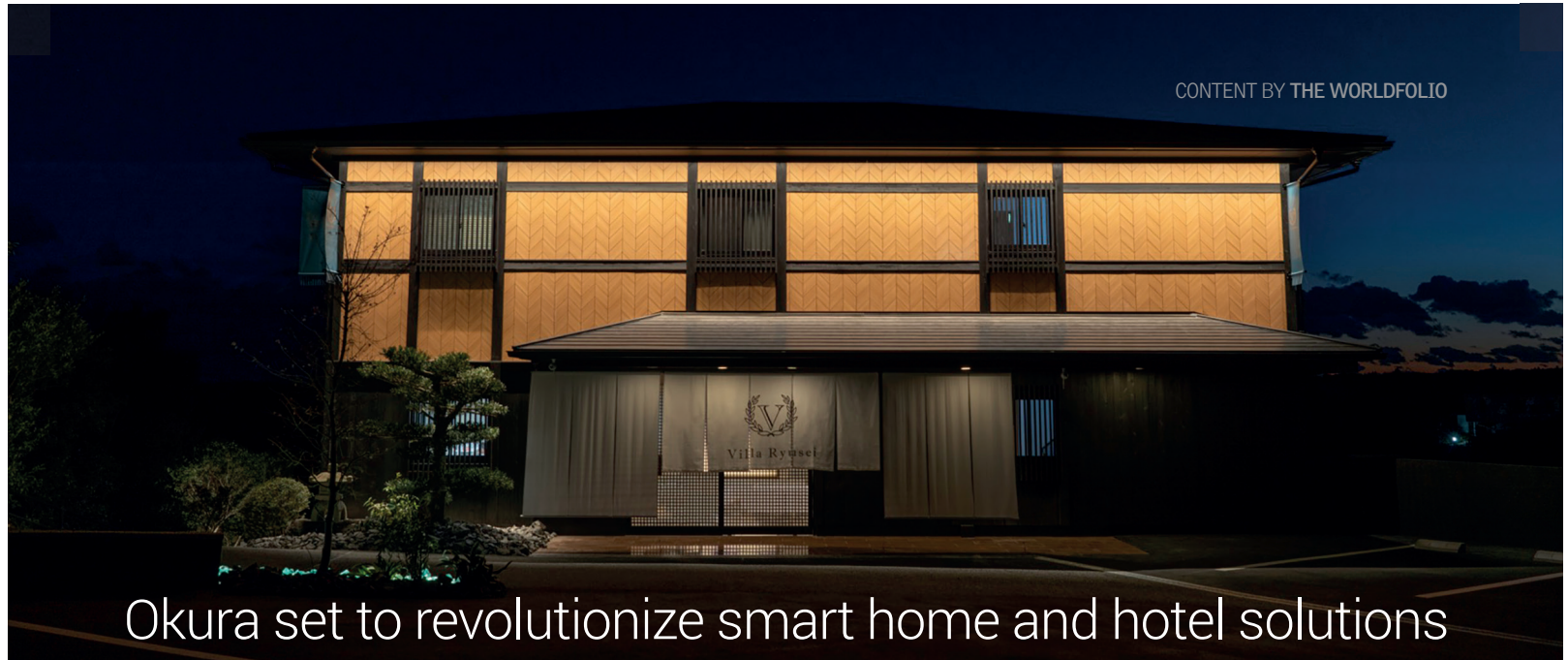
"L-Gate," a learning e-portal linked to the Ministry of Education, Culture, Sports, Science and Technology (MEXCBT).

pany assisted in creating a secure network that allows pupils and children to share almost every facet of school life online, including teaching, homework and grading, using PCs distributed by the initiative.

In order to maximize the effect of the initiative, Uchida introduced the "L-Gate" system to improve the quality of education by conducting, reviewing, and analyzing the teaching and learning processes.



www.uchida.co.jp/global



# Okura set to revolutionize smart home and hotel solutions

**With its HESTA range that looks to make smart home technologies healthier and more affordable, Okura plans to do the same in the hospitality industry with its new Egg Villa.**

Real estate firm turned home technology solutions developer, Okura is the company behind the HESTA range of smart home and hotel solutions. With recent investment to develop household AI technologies – including the HESTA robot that can control household appliances, and a new product HESTA AirClean that is capable of removing 99% of viruses and harmful bacteria from the air – Okura is aiming to

which Okura is a major player in Japan.

"We purchased several small luxury hotels during the wide-spread outbreak of COVID-19," explains Mr. Kiyotaki. "The owners of these hotels believe that the accommodation industry will remain difficult even after the cessation of COVID-19, but in fact the opposite is true. I think that international travelers are demanding new styles of holiday-

tion's R&D facility. "We want to introduce a robot which could do the chores for you and could make your life much easier," says Mr. Kiyotaki. "Once this technology has penetrated the market, the next step is to use it to monitor people's health. We also plan to install face recognition cameras on house doors as a form of home security system. We are ready to provide this kind of technology at a more affordable price, the



"Our main focus is on the smart home business and the promotion of the healthcare features of smart homes that allow people to manage their health at home."

**Shizuo Kiyotaki,**  
CEO & COO,  
Okura Co., Ltd.



Egg Villa

make a big splash in the growing smart home market.

"We are expanding the HESTA range of smart solutions and will be distributing them to major developers across the country," says Shizuo Kiyotaki, CEO & COO of Okura Co. The company's HESTA AirClean is equipped with a special filter that absorbs coronavirus spike proteins and renders them harmless. It has already been widely adopted by medical and educational institutions in Japan and the company also plans to market the device to the hospitality industry, in



HESTA-related Products and Services

ing that incorporate preventative measures against the spread of COVID-19, and the HESTA AirClean will help achieve that."

Okura's smart home range specifically aimed at the domestic market is equally as ambitious, with futuristic concepts already in development at the organiza-

tion's R&D facility. "We want to introduce a robot which could do the chores for you and could make your life much easier," says Mr. Kiyotaki. "Once this technology has penetrated the market, the next step is to use it to monitor people's health. We also plan to install face recognition cameras on house doors as a form of home security system. We are ready to provide this kind of technology at a more affordable price, the

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Villa, a portable self-contained accommodation facility. An easily erectable and portable egg-shaped structure furnished as a self-contained room with beds, water, and other necessities, the Egg Villa is set to be installed in scenic spots all over Japan, the Okura CEO explains.

"We are expecting a lot of inbound demand for the experience of being at one with Japan's rich natural environment. Our target for the next couple of years is to build 1,000 units across Japan. Our final target is to build about 10,000 units. We will not sell them but distribute them free of charge to small towns and cities that want to capture this inbound demand."



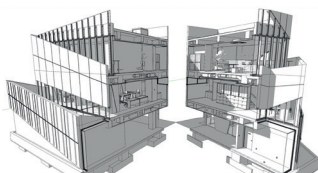
[www.okura.co.jp/renewal](http://www.okura.co.jp/renewal)

# Onocom: Japan's digital construction pioneer

**Leveraging state-of-the-art virtual reality construction simulation software and specialized IT lab facilities, Onocom is leading the Digital Transformation (DX) of the Japanese construction industry.**

Though Japan, and Tokyo in particular, has seen an upsurge of large investments in its infrastructure in recent years driven by the Tokyo 2020 Olympics and Paralympics Olympics, observers and participants of the country's construction industry will promptly tell you that the health of the sector is a long way from the previous time the Olympic Games were in town more than half a century ago.

Back in 1964, Japan was in the midst of a construction boom.



Section of 3D BIM model

Today, the industry is best described as "mature", with aging infrastructure having increased the need for maintenance and repair works, whilst the country's decreasing and aging population has dramatically cut the number of new projects.

"As Japan's population declines, the demand for new projects decreases," says Tatsuro Ono, President of Onocom. "The shrinking population makes it undesirable to construct new buildings, and as such, you don't see many new opportunities in the market currently." However, as Mr. Ono explains, "Onocom is different".

The company, which is closing in on its 100th anniversary, continues to succeed in attracting



VR meeting in Onocom's Lab

new customers and finding new talent. "What sets Onocom apart is that we have implemented and made full use of the latest DX (Digital Transformation) technologies. Through innovation and forward-thinking we have created

change in the Japanese construction industry," he says proudly.

Construction and infrastructure-related companies in Japan can generally be divided into two categories: those utilizing the newest technologies and digitalization; and those using older-fashioned methods of construction. The companies in these two different groups tend to approach construction very differently, Mr. Ono explains.

"Companies that utilize DX in their projects have the added benefit of data management.



Classroom at Onocco in the Philippines

They can continuously run and sustain their projects based on collected data after construction is completed. On the other hand, companies that are doing things the old-fashioned way simply complete their projects without any kind of after-sales support."

To encourage other Japanese construction companies to follow the lead set by Onocom and other forward-thinking peers, the Ministry of Land, Infrastructure, Transport and Tourism recently created a DX initiative called PLATEAU – a 3D scanning project for the entire Tokyo area that aims to convert the entire city portfolio into digital data, from city level to building level.

"Onocom not only provides data for the 3D re-creation of buildings, but we also upload data into the cloud so people can access it easily. We call it a Digital Twin. In the past, our company was only responsible for data submission but now we are going the extra mile utilizing digital sensors," says Mr. Ono. "After we install these sensors in real buildings, we can compare digitalized versions of the buildings to each

other. We can perform usage analysis and propose detailed plans for the future."

Though Onocom has been pioneering such technology in Japan, others in the country's construction sector have been slower to adapt. Whilst the company is proud to lead the revolution and stay one step ahead of its competitors, Onocom's president believes the sooner DX becomes more widespread, the better it will ultimately be for the industry and Japanese economy as a whole.

"DX simplifies management, reduces costs, and influences how much of the actual after-sales work can be done by a construction company, as all the data is kept in the cloud. It can also increase efficiency by streamlining the approach to renovating existing and new buildings. And it is changing the extent to which maintenance and renovation is impacting the construction industry," he says.

Since 2015, Onocom has also been using Virtual Reality (VR) when presenting new project concepts to clients – an area where it has also blazed a trail.

"We adopted VR early on and brought it to the construction



Asahi Intecc Co., Ltd.'s global headquarters and R&D center

industry here," explains Mr. Ono. "VR helps us share construction information with our customers. It allows us to share images of pre-construction and helps us make decisions for when construction is completed. In terms of utilizing other technologies, the possibilities are endless for DX at construction sites. We are now working with Google Glass. We have started verification and



"Our passion and ambition have quickly transformed Onocom into a DX-focused construction company suited to meet the demands of a rapidly evolving construction industry."

Tatsuro Ono,  
President,  
Onocom Co., Ltd.

a plan to launch it this year. It's currently being utilized to improve efficiency at sites and to communicate in real time with on-site staff."



OSG Corporation's NEO Shinshiro Factory

"Onocom will stay competitive even under difficult circumstances," the president surmises. "This is because we continue to evolve with a well-balanced combination of our 100 years of experience, our ambition to combine craftsmanship with art and cutting-edge technology and our founder's philosophy: 'build with humbleness to give life to the dreams of our customers with greatness.'"





CONTENT BY THE WORLD FOLIO

Photo by Katsuhiro Aoki

# Modern interior design for the next generation

A leading Japanese specialist in the interior design of commercial spaces, Semba is embracing digital transformation and a greener future as it widens its portfolio to include schools, offices and healthcare centers.

Established in 1947, Semba Corporation specializes in the interior design and construction of commercial spaces such as shopping centers, supermarkets, cafés and restaurants. "We're a company that creates spaces where people want to come and spend time," says president and CEO Daisuke Yashima.

Changing infrastructure demands in Japan mean Semba is also branching out into non-commercial facilities, such as schools and universities, offices and healthcare centers. "Last year, 80% of our business was related to commercial spaces, and the remaining 20%



Photo by Masayuki Hayashi

"LINK" new possibilities for discarded building materials

was for other areas," Mr. Yashima says. "However, we plan to enhance the percentage of 'others' to around 50% in the next three years."

Also key to Semba's plans is its digital-transformation strategy, which embraces building information modeling (BIM). "BIM is a new workflow for utilizing information in every process, from design and



"Now, we have a vision: be a 'Good Ethical Company'. Our role is to support our clients in their development projects to make them sustainable and future-friendly."

Daisuke Yashima,  
President and CEO,  
Semba Corporation

construction to maintenance and management of buildings, by adding data such as costs, finishes, furniture, fixtures and equipment to a database of 3D building models created on a computer," Mr. Yashima explains.

"We started promoting BIM two years ago. Our first focus is visualization, and we call it 'virtual simulation'. In the past, for interior design, we had to look at documents and diagrams, then talk with the clients based on that, and sometimes there was miscommunication. However, if we can visualize it, it's easier to understand and reach an agreement among the related parties. We've been receiving positive feedback from our clients."

As Japan targets carbon neutrality by 2050, Semba's focus is also on a greener future. Mr. Yashima says. "Now, we have a

vision: be a 'Good Ethical Company'. Our role as an ethical company in the UN's Sustainable Development Goals is to propose ways to make our clients in their development projects sustainable and future-friendly."



Study using BIM

In our company, we have begun to "re-think" all design processes in the creation of spaces with a compassionate perspective toward people, communities, and the natural environment, which we call ethical design thinking.

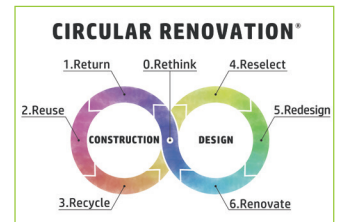


Diagram of "Circular Renovation" Services

Mr. Yashima continues: "We're thinking about how we can do renovation without producing waste. We have six solutions, which are the six Rs: return, reuse, recycle, reselect, redesign and renovate. We want to standardize these solutions as a new service we can provide. Once you connect the six, it becomes a circular diagram, which is why we call it 'Circular Renovation'."

With offices in China, Hong Kong, Malaysia, Singapore, Taiwan and Vietnam, Semba boasts a growing international presence, working with Japanese and local partners to create commercial spaces overseas, chiefly in Southeast Asia. "We currently have around 400 domestic members of our company, and 100 abroad," Mr. Yashima says. "But we believe it will be divided by half – between the people working in Japan and abroad."

**SEMBA**  
www.semba1008.co.jp/en