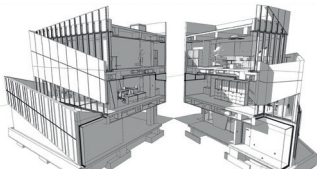


Onocom: Japan's digital construction pioneer

Leveraging state-of-the-art virtual reality construction simulation software and specialized IT lab facilities, Onocom is leading the Digital Transformation (DX) in 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 might be 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 Onocom in the Philippines

They can continuously run and sustain their projects based on collected data after construction is completed. On the other hand, companies which 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.'"

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