Rittal – The System.

Faster – better – everywhere.

Songdo – a smart city in Korea
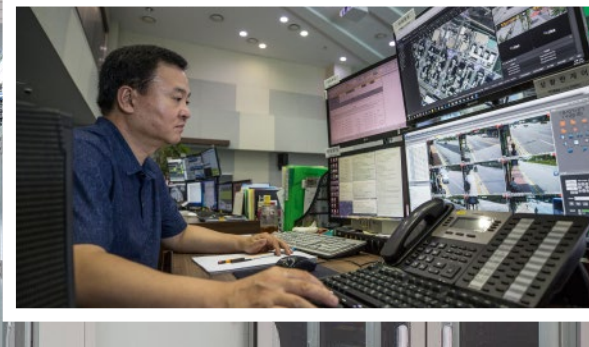
Customer: Songdo New City, part of Incheon City, seaport and industrial city with about 2,9 mill. inhabitants

Smart cities are networked and high-tech environments designed to improve residents' personal and professional lives, while also making them more sustainable. Among other things, urban planners achieve this by analysing traffic flows and air data and appropriately adjusting traffic management systems. But capturing and analysing data, such as daily temperatures or traffic levels, calls for a highly efficient and secure infrastructure. A prime example of this can be found in a new district of the huge city of Incheon, South Korea, which features a data centre designed by Rittal.
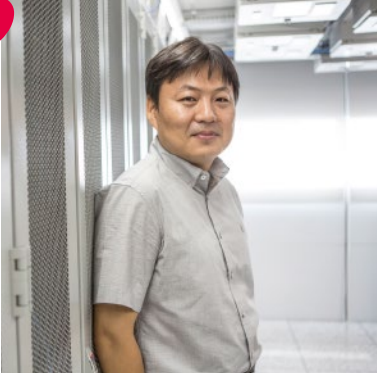
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> ## "That makes it one of the fastest projects in the world"

Sangho Lee,
Director of the IFEZ Smart City
Integrated Operation Center

THE PROJECT

The Challenge

- Data collection and analysis (e.g. temperature and traffic)
- High available infrastructure with state of the art server, network and computer
- Scalable upgrade for future growth and redundancy

The Solution

- Fail-proof Cloud DC with Rittal products such as IT-racks, cooling devices, energy distribution, UPS, power distribution, fire security, monitoring and access control) from one vendor
- Fast implementation and easy configuration due to standardised IT infrastructure

Measurement data for better quality of life

First and foremost, evaluating measurement data calls for a stable infrastructure with powerful servers, networks and computers that can quickly respond to incidents and deviations. This is in part why IT expert Sangho Lee, Director of the IFEZ Smart City Integrated Operation Center, opted to use a dedicated, fail-safe cloud data centre. This is where the data from all the transport, environmental, crime prevention, fire protection and building management sensors is brought together. "I was looking for a suitable solution and was very impressed by the data centre's design modelled on cloud computing," Lee recalls. "Rittal already provided solutions for all the data centre system's components, which could be configured in next to no time thanks to the standardised IT infrastructure." In addition to the TS IT racks from Rittal, the data centre also comprises the necessary modules for climate control, power distribution, uninterruptible power supply, fire protection, monitoring and access control.

Besides supplying the hardware, Rittal Korea assisted the IFEZ Smart City Integrated Operation Center with devising its data centre concept. "With the aid of 3D designs, we showed the customer what would be ideal for their specific needs," says Brian Moon, who manages IT sales at Rittal. After all, the building isn't really a suitable location to install a conventional data centre due to its low ceilings and raised floors, which means that the rooms require special insulation and cooling. What's more, the customer was keen on having a scalable infrastructure so it could grow alongside the city.

Turn-key solution

Both cold-aisle containment and inline cooling provide energy-efficient climate control for the IT systems. The actual cooling is performed by Rittal Liquid Cooling Packages (LCP) with a redundant design. The customer received everything from a single supplier – from the racks right through to power distribution. Once the cables were laid, the data centre took just under three months to fully install. "That makes it one of the fastest projects in the world," says Lee with pride. He also intends to rely on the expertise of his proven partner for future projects, as the work in Songdo continues unabated. Self-driving cars are soon expected to ensure greater road safety and reduce pollution levels. Purpose-built camera drones, meanwhile, collect traffic and environment data, which is then analysed using artificial intelligence to develop yet more innovative services for local residents.

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