



## Panasonic and Skanska - a cooperation for Construction 4.0

FZ-G1 tablets have been implemented at Skanska offices and construction sites, where they enable workers to access project information, specialised applications, CAD and BIM software.

**Client** - Skanska  
**Location** - Poland

### Challenge

Access to full project information both in the office and at the construction sites, limitation of paper documentation

### Solution

Toughpad FZ-G1 with electronic documentation management system and BIM software  
Leica CS35 (Toughpad FZ-G1 with Leica Captivate software)

“ Panasonic tablets helped us streamline the flow of information and therefore the carrying out of construction work ”

Aleksander Szerner,  
Manager of Digitalization  
and Smart Equipment  
Technology at Skanska S.A.



## Innovation and digitalization

Innovation and digitalization drive the growth of virtually every sector of the economy, including the construction industry. With new technologies in place, architects increasingly give up technical drawing for 3D digital models. However, in order to be able to think of a real growth and faster project implementation, technologies must leave the immaculately clean offices and enter the construction sites.

## Technologies must leave the immaculately clean offices and enter the construction sites

Skanska, one of the leaders in the construction and property development industries, has been aiming to implement the transformation towards Construction 4.0 for several years. The first stage of this process is the introduction of intelligent working tools and digitalization of all operational activities. For this reason, the company entered into cooperation with Panasonic, a manufacturer of specialist tablets and notebooks of Toughpad and Toughbook series.

These devices appeared both in selected offices, and in the field, which enabled the company to reduce the amount of paper documents, streamline and organize the flow of information, and most importantly - fully leverage the benefits of the integrated approach in project implementation, such as the BIM methodology used by Skanska.

## Comprehensive approach

The assumption of the BIM methodology, i.e. project information management, is to provide all participants of an investment process - from the designer through engineers and subcontractors to the investor - with access to project information, such as its spatial model and any information on materials, costs or schedule of works. This streamlines the exchange of various data, which significantly speeds up the construction and facilitates its coordination.

## Engineers in the field had no tool that would provide them with access to digital data

Although the BIM technology has been a standard in Skanska's design studios for several years, until recently its availability at construction sites was poor. Engineers in the field had no tool that would provide them with access to digital data and be designed for work under various weather conditions and resistant to falls, shocks or dust.

## Electronic documentation management system and the BIM software

Rugged Panasonic tablets proved to be such a tool. Skanska implemented 100 units of Toughpad FZ-G1 which had been tailored to the company's needs and equipped with specialized applications, e.g. for electronic documentation management and the BIM software. This enables engineers at construction sites to access current information on the project being implemented and to easily update it. For engineers, tablets are now a tool for work and communication with colleagues both at the office and in the field.

## Mobile office at the construction site

Panasonic devices were chosen mostly due to their reinforced housing. The FZ-G1 model is a fully rugged solution designed so as to meet the requirements of work at construction sites. The casing has an anti-slip finish, is waterproof and dustproof. Its anti-shock systems enable it to withstand a fall from up to 180 cm. Model will also resist extreme temperatures, rainfalls and snowfalls and can be easily operated in thick work gloves.



## 10.1-inch screen

In the field, another asset of the Toughpad is its easy to read, 10.1-inch WUXGA screen (1920x1200) with high brightness (up to 800 cd/m<sup>2</sup>). It enables to view HD-quality documentation and images, even in very intense light. The screen is also large enough to display technical drawings, plans and diagrams.

## Full-scale operating system and suitable computing power

Another key device selection criterion was its full-scale operating system and suitable computing power. The FZ-G1 is equipped with Windows 10 Pro system and Intel Core i5 processor, which will enable operation in the Microsoft environment, as well as the use of specialist applications. As a result, the tablet may substitute a desktop computer.

"For our company, the biggest challenge was the access to design information and the replacement of paper documentation with its electronic version. We searched the market to find a solution that would provide the notebook with efficiency, and at the same time could be used at a construction site. The Panasonic tablets enabled this and, importantly, have been fully adjusted to our requirements. They helped us streamline the flow of information and therefore the carrying out of construction work," says Aleksander Szerner, Manager of Digitalization and Smart Equipment Technology at Skanska S.A., President of BIM for Polish Construction Association.

## Even more data

Besides Toughpads designed by Panasonic, the field employees of Skanska also use 50 same FZ-G1 models in Leica CS35 version. This solution has been developed by Leica Geosystems specially for geodetic teams.

## Joint forces of Panasonic and Leica Geosystems

"We have extended our product portfolio with the Panasonic Toughpad for the most demanding customers. By combining such an efficient, durable and relatively big tablet with the specialist geodetic software, we obtained probably the best-in-class device for work at a construction site. We offered this combination to Skanska, being confident that it would meet all their expectations," says Marcin Pucitowski, Segment Manager at Leica Geosystems.

## The best-in-class device for geodesists

Leica CS35 tablet is based on Toughpad FZ-G1, and is equipped with the professional Leica Captivate software. It was designed to visualize and collect data from measuring instruments used at construction sites, including MultiStation and tachymeters. The solution gives you access to a huge amount of materials and the ability to manage them. It also enables visualization of realistic 3D models.

The combination of Leica software with the big touchscreen of the Panasonic tablet enables fast and convenient processing of data. It allows you to display measurement and design information in all dimensions, including 3D models from Leica measuring instruments, as well as visualize the scans coming from tachymeters and laser scanners. As a result, collecting and modelling data in the field is easy, intuitive and fast.

## Lightning implementation

The implementation of Panasonic devices at Skanska took only three months. The purchased devices, i.e. 100 Toughpads FZ-G1, are used by mobile employees who travel between the office and the construction site - engineers, site managers and foremen. At the same time, 50 Leica CS35 models were delivered to geodesists working in the field. Thanks to the intuitive operation of the tablets, the company could skip the preparatory training, and its employees quickly got used to the new devices.

"The construction industry in Poland is a huge sector which undergoes changes and needs new solutions. Therefore, it is a very attractive market for us," admits Jacek Wielgus, Partner Account Manager - CEE Region at Panasonic. "Our cooperation with partners such as Skanska and Leica Geosystems, who are not only open to uptake of innovations, but also create them, helps us better understand the market and develop our products in the right direction. This is beneficial not only for our companies, but for the entire industry as well," Jacek Wielgus adds.