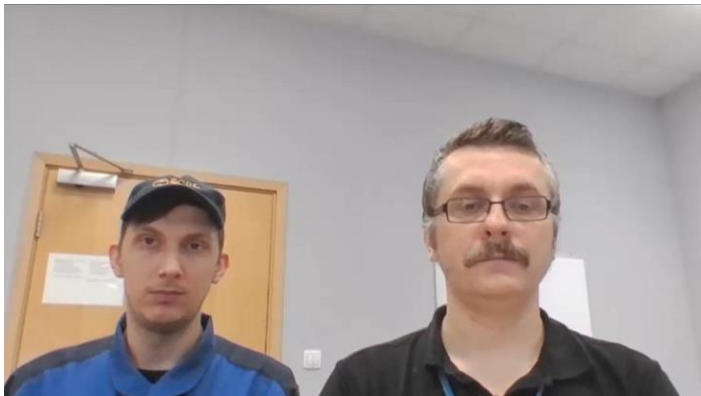


Sohbi Craft Poland Co. Ltd.

Lean Management in Practical Application of Simulation Tools

Sohbi Craft Poland Sp. z o. o. (Sohbi) was convinced that simulation tools could fundamentally change how they design their production lines. An encounter with FJGP4D ('GP4') led them down the path of digital transformation and their approach to production line design and modification has evolved in unexpected ways.

In this article we will show how Sohbi implemented GP4, expanded operations to the Sohbi Group's production sites worldwide, and developed a business model utilizing simulations for external companies.



Mr. Grzegorz Gos
Industrial Engineering

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Deployment case study key word

Design Product

Manufacture of automotive parts and precision equipment, mold design and construction, unit assembly, etc

Solution

Fujitsu's Manufacturing Solutions

[▶ Manufacturing Solutions Page](#)

Product

FJGP4D

[▶ Product's page](#)

Introduction and development of GP4

Sohbi was increasingly feeling the need for simulation technology to further automate the factory using robots and other equipment. It was at such a time that Fujitsu introduced them to the GP4 software, which can simulate production line layouts and enable process design using 3D data.

The company started a paid trial at the end of 2022.

However, Sohbi doesn't have many manual processes such as assembly, which is GP4's forte, so the company was initially unsure whether it would be able to make good use of the technology.

For this reason, Mr. Marcin Zielinski, an industrial engineer and the proponent of GP4, spent a month in the Philippines to learn how to create simulation data, following examples of robotics lines at Sohbi's sister factory in the Philippines.

The sister factory has a wide range of production processes which allowed Mr. Marcin to test almost the entire range of GP4 functions. As a result, Mr. Marcin learned a unique method of creating simulation data and manufacturing process visualization enabling him to share ideas with the process design team in a way, that would have been difficult using traditional manufacturing process design methods.

This allowed the team to concentrate on process design and demonstrated that the time required for study could be significantly reduced. This success led Sohbi to decide to purchase a license for GP4 and further develop the simulation project.

Benefits of simulations

Mr. Marcin immediately began using GP4 to plan and improve a production line for Sohbi's new product. The line was visualized as 3D data, including robot movements.

With the help of GP4 it was possible to simulate and test lines where either robots or a line pacer (transfer) device were used to move products between presses.

After trial and error of various improvement ideas concerning product reversal method, operator movement, and work sequences, the cycle time was reduced from 24 seconds in the initial proposal to 12 seconds, and the number of operators was reduced by two.

The project also included a Taiwanese supplier of additional equipment to be manufactured. The supplier was able to design the equipment as expected thanks to video sharing of simulation data. This case study shows that simulation tools can be a powerful tool for facilitating communication between people who speak different languages.

Furthermore, the production capacity of the production line in the simulation was confirmed to be very close to that of the actual line.

Through this project, Mr. Marcin strongly realized that simulations create value beyond visualization of the production processes.



Figure 1: Production line planning using GP4

Production line planning consultation using simulation data for external companies

Since the introduction stage Sohbi has been considering the use of simulation technology as a business tool for its external customers. Therefore, the company actively participated in a number of conferences to introduce the effectiveness of simulation-based production line planning.

In 2024, several customers in Poland and Japan requested simulation quotes, so the company purchased an additional GP4 license and began training another simulation specialist.

In Europe, many companies rely on human labor and many of them aim to automate their production processes.

Sohbi is commissioned by such companies to design automated production lines, create robot programs, and perform maintenance work.

By utilizing simulation tools, the company is able to freely consider multiple line layouts and study in-plant logistics.

As a result, the Sohbi is highly appreciated by its clients. The introduction of GP4 has not only revolutionized the traditional design and development process, but has also helped establish a new business model based on simulation technology.



Figure 2: Production line planning consultation for external companies

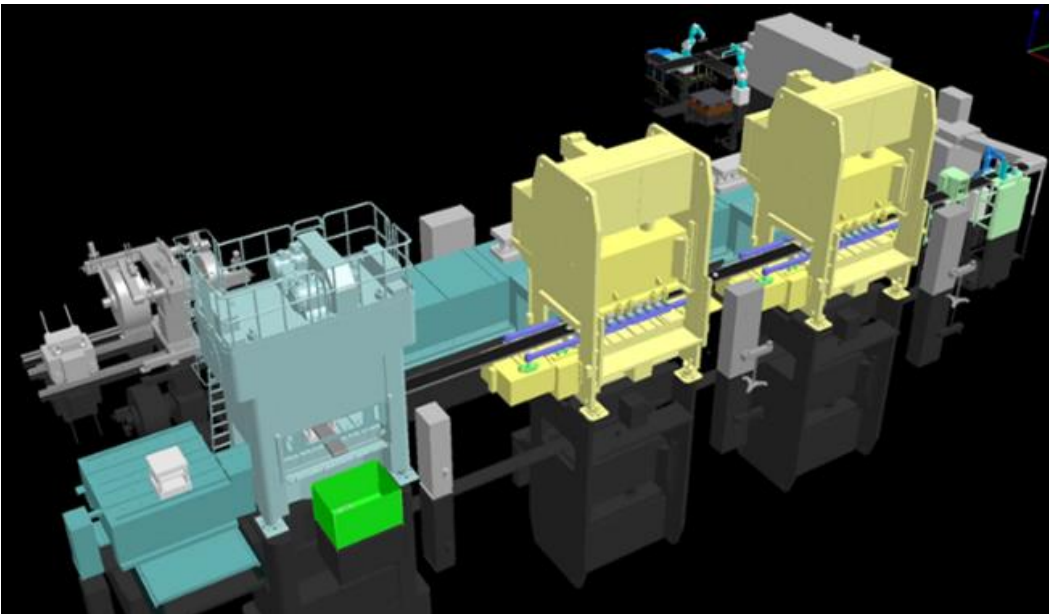
Future Development

Sohbi has been utilizing GP4 simulations in their own and their customers' production lines in a variety of scenarios, including

- New production line design
- Work planning
- Various production line tests
- New solution design/application of latest technology
- Continuous improvement
- Lean training
- Marketing

Through these experiences, Sohbi are convinced that simulations can be applied to a wide range of lean management activities, and aim to further evolve simulation technologies and expand the scope of application.

If you have read this case study and would like to request a manufacturing line design simulation from Sohbi, please feel free to contact Fujitsu.



Company Profile

Sohbi Craft Poland, Sp. z o. o.

Established: 2007 **Number of employees: Approx. 300**

Business activities: Manufacture of automotive parts and precision equipment, mold design and construction, unit assembly, etc.

Sohbi Group Head office: Yao City, Osaka, Japan **Established in 1958**

Other overseas locations: China, Thailand, Philippines

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Contact Us

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