

Using Time Prism to create a highly efficient production system for producing small volumes of a wide variety of wireless communication products

Company Profile

ICOM has steadily grown since its founding in 1964 to become a world-class wireless communication brand. ICOM branded products include two-way radios for business and marine use as well as amateur-radio apparatus.

And more recently, the company has been at the forefront of the rapidly advancing digitization of wireless communications.

The high-quality, high-performance products bearing the ICOM name are manufactured in Japan by Wakayama ICOM Inc.

ICOM has refused to compromise on quality by offshoring production and has therefore been forced to achieve high levels of productivity at its manufacturing plants in Japan in order to remain competitive.

Wakayama ICOM manufactures all of the ICOM branded products at its plants in Arita and Kinokawa in Wakayama Prefecture, Japan.

In this day and age, customers continually demand that Quality, Cost and Delivery (QCD) are continuously improved. With the introduction and effective use of TIME PRISM work analysis software, there have been massive improvements in productivity at the ICOM plants, which have helped ICOM keep their customers more than satisfied.



Background

Because of relatively high labour costs, the large number of components in each product, and low production volumes, Wakayama ICOM uses its own unique combination of cell and production-line manufacturing. Small teams of workers are responsible for assembly, inspection, and completion of a product, with cells being combined as and when necessary. The benefit of such a system is that improvements and ways of increasing productivity are easy to identify and introduce.

Additionally, to respond to customer needs, the flexibility to produce a wide variety of products in limited production runs is necessary. Furthermore, with sensors for collecting data located intra-process, processes can be visualised and thus work times measured and work balance analysis performed.

The data obtained is used to find problems, identify the causes, come up with solutions, and then make improvements. By repeating these actions over and over again, significant improvements in quality and productivity were achieved at Wakayama ICOM.

Task (Challenge of manufacturing due to environmental change)

However, because Wakayama ICOM manufacture a wide variety of products in limited production runs, they were forced to improve their manufacturing processes in order to maximize the benefits by minimizing production time and labor hours.

1. Work Analysis: should be done promptly and accurately as the analysis and visualization till then were inefficient and insufficient.

2. Work Organization: should be done accurately for levelling work elements in order to get rid of wasting time for targeted profit.

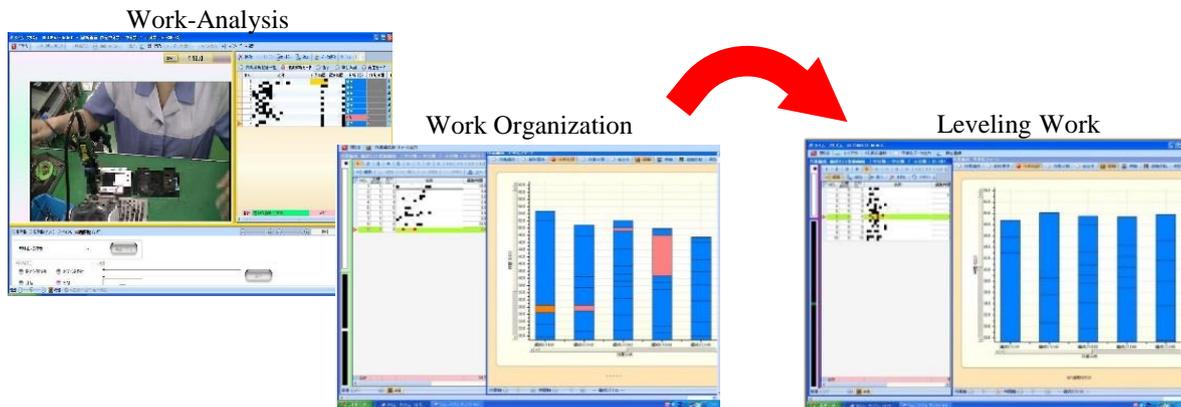
3. Multi-skilled development should be continued and standard operation must be performed in order to minimize too much production stages.



Steps for Solution

They have set following program, using Time Prism;

1. Getting data of standard work of each process and each element work.
2. Analysing work before starting the production of new merchandise.
3. Organizing work from the data of 1. and 2.
4. Starting the production of new merchandise based on the above work analysis and work organization.
And checking several times the difference between plan and actual result.
5. Creating standard work for multi process with multiple production models. Work instructor check data of Time Prism beforehand and creating promptly.



Result

We could see following effects for special products since we have started using Time Prism.

■Improvement in work efficiency (tact time) :	54sec. to 46sec. improved by 15%.
■Starting-up of new products (LT time) :	25H to 16H decreased by 33%. *The period from the beginning to reaching targeted tact.
■Time to learn whole work. :	16min. to 9min. decreased by 43%. *The time for the worker with multi-process and multi-products to reach the targeted tact.

In addition, the inferior product rate has been decreased by 20% due to improved standard work.

Customer Feedback



- Making improvements becomes more effective, as we could visualize loss of work which we have missed.
- We could create many ideas by utilizing Time Prism. It might be an oasis in the desert.



- When Time Prism was introduced, we got confused to operate and utilize. However, in one month Time Prism became our indispensable tool for Kaizen process.
- We have expected improvement of work efficiency. Furthermore the motivation of each employee has been lifted up and the quality of products also has been improved.



- We have been aiming for maximum production from the start of small lot and multi-items. We could materialize Kaizen process by utilizing Time Prism.
- Time Prism has become vital tool for our production line. We will make further efforts for our manufacturing process