

Pursuing absolute  
**KAIZEN™**  
in every field



# 6.000+

INSTALLATIONS ACROSS

# 20+

COUNTRIES

## KAIZEN™ Time Study powered by OTRS™ – Digital Workstyle for All

KAIZEN™ Time Study<sup>1)</sup> powered by OTRS™, a Continuous Improvement (CI) software application that has been improved over the years, based on the experiences of leading Japanese manufacturing companies, who seek for the ultimate Just-In-Time process and extreme efficiency of operations.

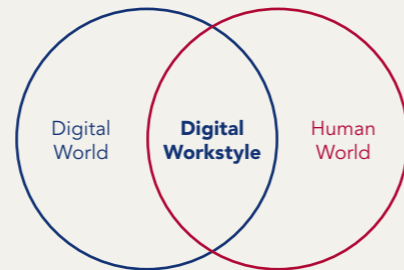
KAIZEN™ Time Study contains the know-how, developed on Industrial Engineering (IE) techniques and related studies. It provides the time and motion analysis to improve the operations through filming, resulting in the reduction of time and money spent, while engaging people on sustainable improvement activities and increasing motivation of the workplace.

It uses video to analyze operations and help you eliminate inconsistency, overburdening, and waste; standardize processes; and pass on knowledge and skills. With KAIZEN™ Time Study, you can analyze your workplace operations, eliminate waste, and run operational simulations, while increasing the knowledge and practical application of the Toyota Production System and Industrial Engineering.

<sup>1)</sup> In this brochure OTRS™ refers to the Continuous Improvement software application developed by Kaizen Institute's partner Broadleaf Co., Ltd. KAIZEN™ Time Study offered by Kaizen Institute has the same functionalities as OTRS™.

# Digital Workstyle for All

Automated digitization is not effective. Good digitization empowered by improvement minded people can be powerful. KAIZEN™ Time Study enables the perfect balance of effective digitization and the development of people who always seek improvement.



# KAIZEN™ Time Study Concept

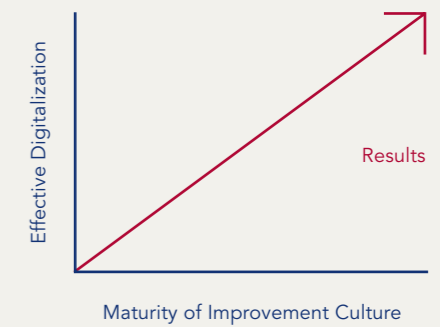
A software designed to accelerate the implementation of Industrial Engineering best-practice techniques to drive operational excellence into businesses of all kinds.

## 1 2 3

**Eliminate Muri**  
(overburden)  
**Muda**  
(Waste)  
**Mura**  
(unevenness) and  
**improve QCD**  
(Quality, Cost, Delivery)

**Create standardized work practices to establish a fair evaluation system**

**Stimulate your workplace by improving the "motion mind"**



# OTRS™ implementation flow and implemented cases

**RESULT**  
Time spent on task analysis

## Implementation case Automobile manufacturer

Want to reduce the labor, time, and costs associated with work analysis.

**SOLUTION**

Typically, work observation is conducted using a stopwatch, but this method makes it difficult to get accurate measurements, resulting in the need to repeat the process many times. With OTRS™, an intuitive user interface and “fast-forward” and “frame advance” video control functions enable rapid on-site motion analysis.

\*The OTRS™10 user interface is a registered design.

REDUCED BY

**50%**

**RESULT**  
Production output per day

## Implementation case Construction material manufacturer

Want to create the optimum production process matching our new production efforts.

**SOLUTION**

Identified multiple work flows and bottlenecks using the OTRS™ side-by-side video and operation structure simulation functions. Then performed work recombination/work rearrangement simulations to create new processes and applied them to actual production lines, enabling drastic improvements to daily production output.

\*OTRS™10 is capable of performing simulations linked to analyzed video.

108

↓  
**150**

**RESULT**  
Pre-line production Training hours

## Implementation case Electronic component manufacturer

Want to rearrange working environment for better technological training and skills transfer

**SOLUTION**

Pre-line production training for new workers used to be “OJT”<sup>\*1</sup>. But with OTRS™, new workers shot video and analyzed by themselves, comparing work flow/motions of new workers against experienced workers<sup>\*2</sup>, which resulted in reducing a great amount of training time.

\*1 On the Job Training. Training conducted on actual production floor through performing actual tasks.

\*2 OTRS™10 features “Rating” function that allows replay of time change simulation.

REDUCED BY

**50%**

**RESULT**  
Pre-line production Training hours

## Implementation case Electrical equipment

Want to save on production line labor by optimizing production process

**SOLUTION**

Conducted simulation to reduce non-value adding tasks using OTRS™. Conducted pre-production line training in preparation of implementing simulated process. Able to significantly reduce non-value adding activities, such as migration and standing by to reduce production line labor.

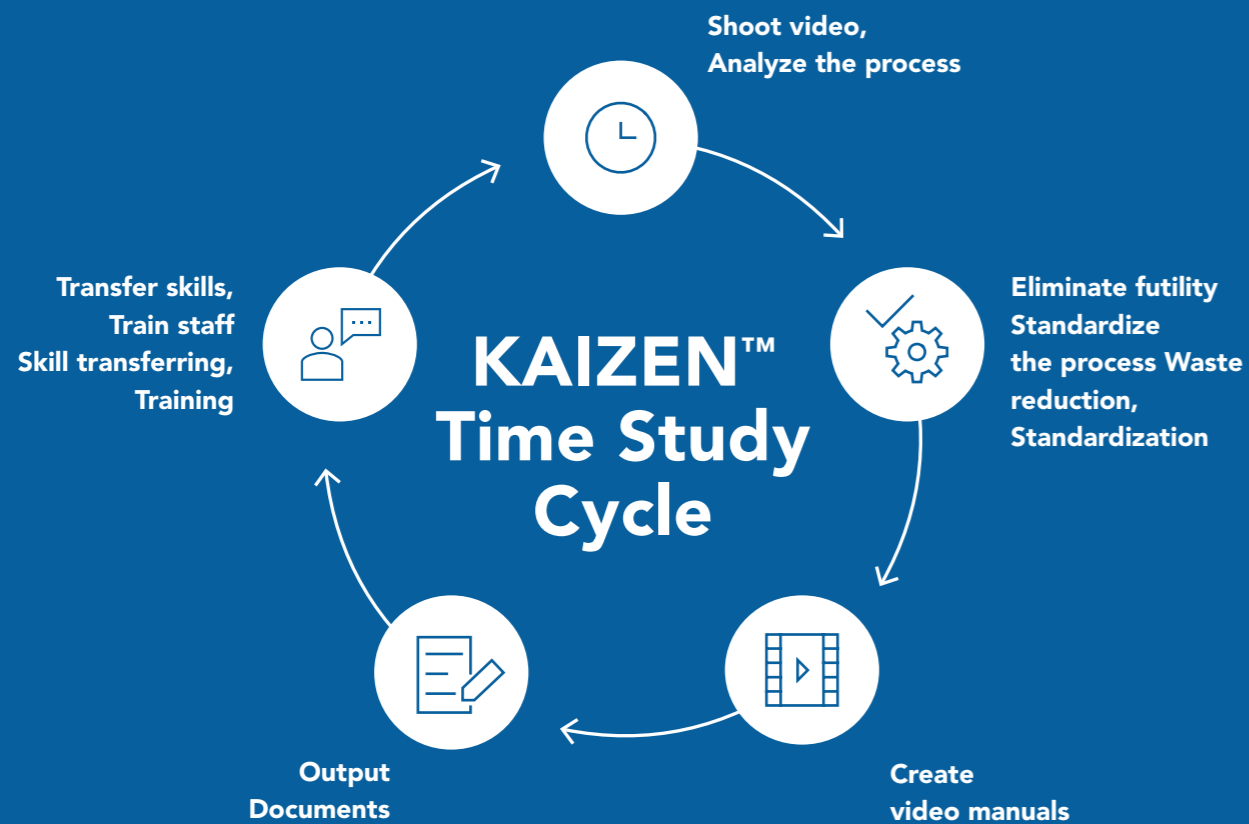
\*OTRS™10 is capable of measuring non-value adding time included in working time.

26 PER.

↓  
**19**

PER.

## Voice of researcher



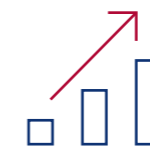
### “Standard Time” and “Mind-Motion Mindset”

There are very few companies that have the ability to properly perform time analysis on the actual production floor. The companies are very much aware that time analysis is very labor intensive and time consuming, so it is understandable that time analysis tends to be put on the back burner.

“Standard Time” and “Mind-Motion Mindset” are the key elements in advancing flow. Standard Time is the core element in production management and serves as an index. If an operation is being performed quicker than its Standard time, it is time to review standard operation and standard time. On the other hand, if an operation cannot be performed within the standard time, the cause must be identified and rectified. Mind-Motion mindset, is the mindset to be always be on the lookout for more efficient ways. A company that has the correct understanding of IE is aware of the importance of having this Mind-Motion mindset and conducts detailed time analysis to return concrete results. It is said that you cannot achieve such results unless time analysis is properly conducted.

The highest hurdle one often encounters in trying to seriously improve task performance is Time Analysis. I believe that OTRS™ is not only a useful tool in resolving this issue, but it is also a software that can contribute towards raising awareness of KAIZEN™ in industries as a whole.

### Improving efficiency Organizing your teams



By using OTRS™ to perform this usually extremely time and labor intensive analysis

“Analysis which used to take days  
now only takes hours!”

Major Japanese  
construction company

## Product line-up

Product	Version	Main functions						
			Replay ana-lyzed video (including comparison replay)	Various kinds of tabulation and output	Motion analysis, comparative Analysis	Element reclassifica-tion	Task formation (Combinatin chart, work load chart)	Multi-axial analysis
<b>Model 501</b>	Software	501-V10	●	●	●	●	●	●
	System maintenance support	501-V10-HS						
<b>Model 401</b>	Software	401-V10	●	●	●	●	●	
	System maintenance support	401-V10-HS						
<b>Model 301</b>	Software	301-V10	●	●	●	●		
	System maintenance support	301-V10-HS						

\*KAIZEN™ Time Study and system maintenance service are available at open prices. Please contact our partners for detailed information.  
\*One-year free support is available alter purchase. Chargeable support from the second year and thereafter is available.



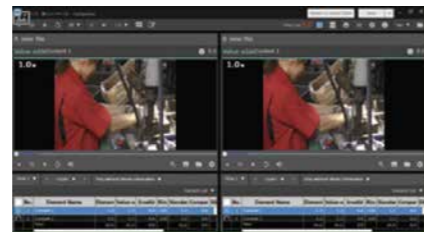
## KAIZEN™ Time Study Screen Collection



### Motion Analysis and Playback

Make conducting detailed motion analysis easy with our User interface tailor-made for video motion analysis. Create visualizations of work imbalances using cycle analysis.

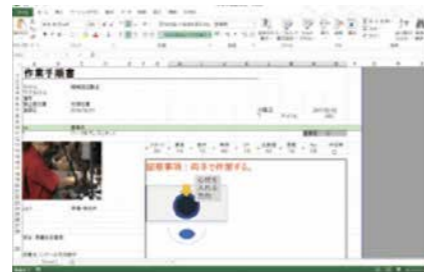
**Comparative Playback**  
Visualizations of work disparities. Output results of analysis as a manual with comparative videos.



### Line Balancing

Create a high precision structure simulation using analysis results. Output the results of simulations as standardized work combination tables.

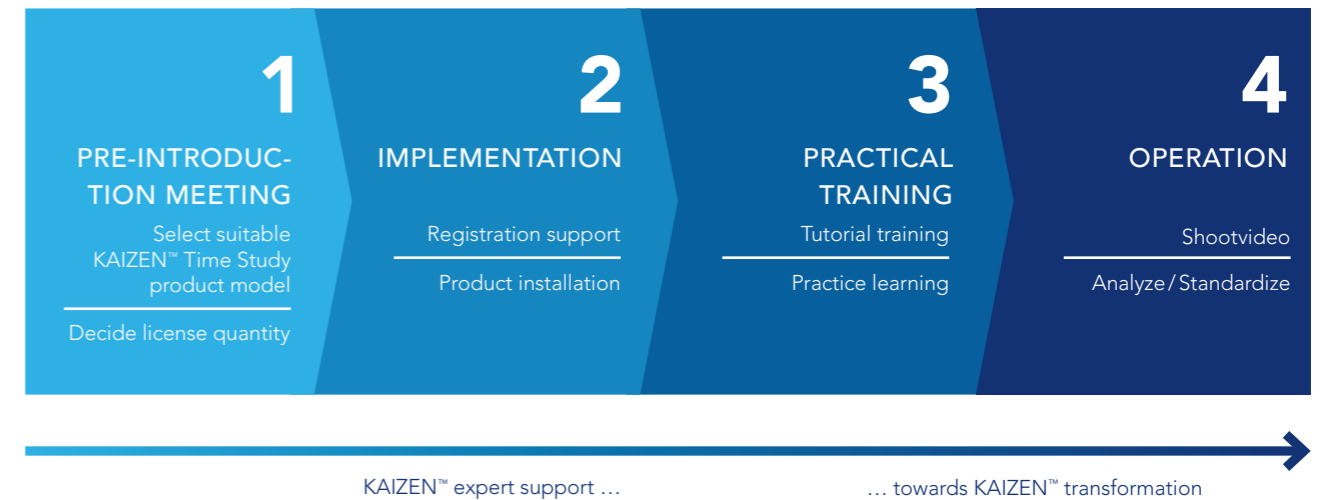
**Varied Reporting**  
Analysis results can be output as a work process document or video manual. You can also customize the output formal to match your company's procedure manuals.



### Embedded PowerPoint or Excel

Direct embedded PowerPoint or Excel output for easier usage in handbooks or standard work sheets.

## Utilization of KAIZEN™ Time Study from preparation to usage



## KAIZEN™ Time Study Support Service



\*Only available in Japan

## System requirements

<b>OS</b>	Windows 10 Pro/ 8.1 Pro / 7 Pro (SP1 or later)		
<b>CPU</b>	Intel Core i5 series 2nd generation or later 2.6 GHz		
<b>Memory</b>	4GB or more	<b>Simultaneously installed bundled software</b>	MS Visual C++ 2010 Runtime MS .NET Framework 4.6.1 MS Speech Platform 11
<b>HDD</b>	2.2 - 6 GB of disk space (Required disk space will vary according to functions required.)		
<b>Display</b>	1024 x 768 dots (XGA) or higher		
<b>Video format</b>	MPEG1, MPEG2, AVI (Motion JPEG), MOV, MP4, AVCHD, WMV *Dolby audio playback non-compliant *WMV is usable only with video output from OTRS™10.	<b>Language</b>	Japanese, English (Other languages can be added by providing your own translation)

- OTRS™ is a registered trade mark of Broadleaf Co., Ltd. in Japan.
- KAIZEN™ Time Study has the same functionalities as OTRS™
- Microsoft, Windows, Excel and PowerPoint are registered trademarks of Microsoft Corporation in the United States and / or other countries.
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- Other names of companies and products mentioned herein are trademarks of the respective companies or of this company.
- Please be advised that design and / or specifications of the products may be changed for improvements without prior notice.
- The contents, figures and specifications listed herein are as of August 2018.
- To output documents in Excel/ PowerPoint / PDF, Excel (2010, 2013 or 2016). PowerPoint (2010, 2013 or 2016). Acrobat DC are required.
- Operating KAIZEN™ Time Study may become slow depending on PC performance and data volume of video used.
- For your greater convenience and comfort in using KAIZEN™ Time Study, we recommend you use PC with high-spec CPU and large RAM.

**“KAIZEN™ Time Study became a great catalyst to implement the change culture in our organization as it enables everyone to improve their own work.”**

A Lean Leader



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