

# Wedge

A FAST INDUSTRIAL DATA ANALYTICS TOOL

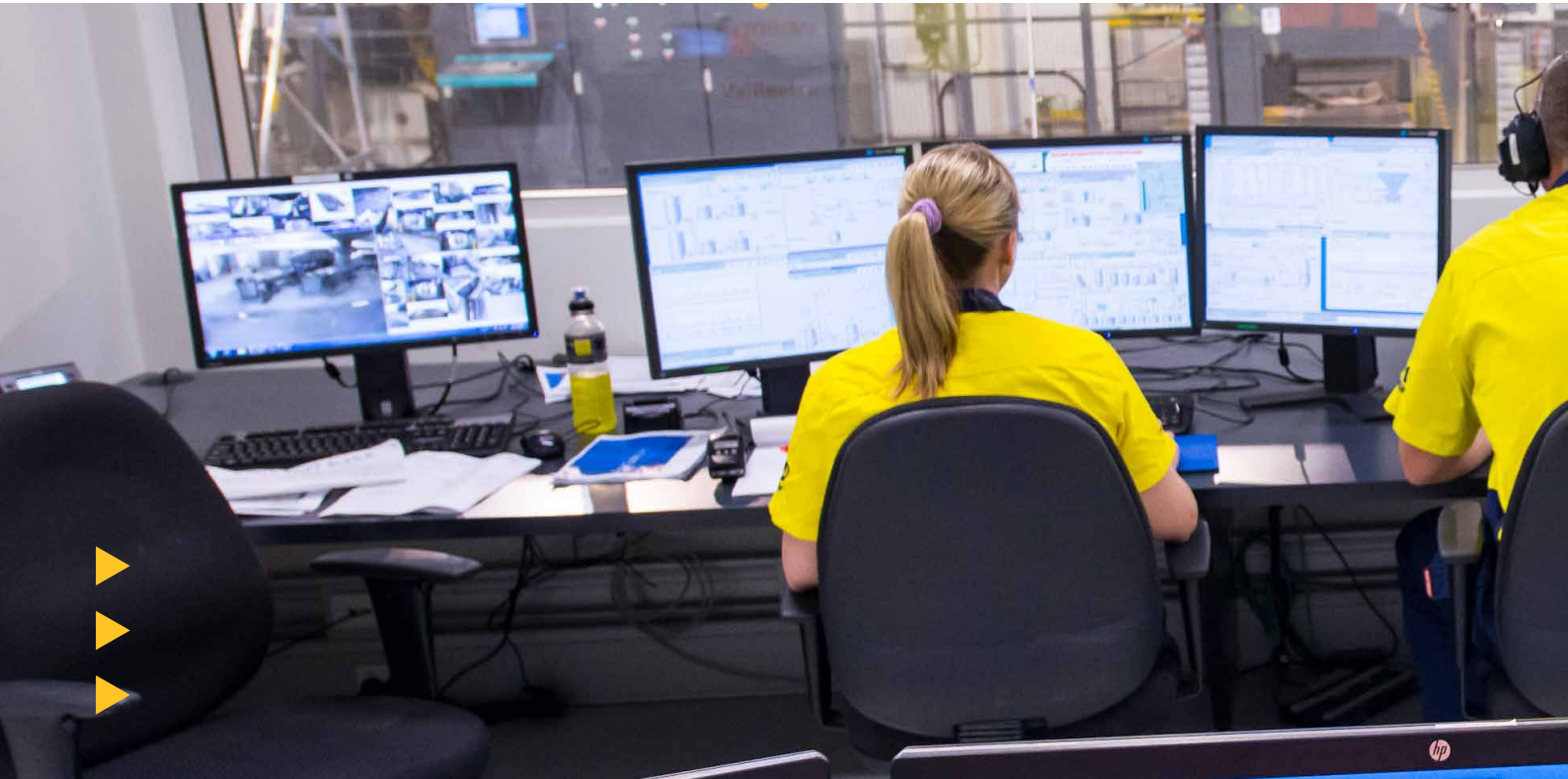


**Wedge**

- ▶ A WEEK'S DATA-ANALYSIS WORK IN ONLY 15 MINUTES
- ▶ COST SAVINGS THROUGH ADDRESSING ISSUES RAPIDLY
- ▶ AGILE DEPLOYMENT & HASSLE-FREE USE



# Powerful data-mining & root-cause analysis



## A whole week's data-analysis work in only 15 minutes

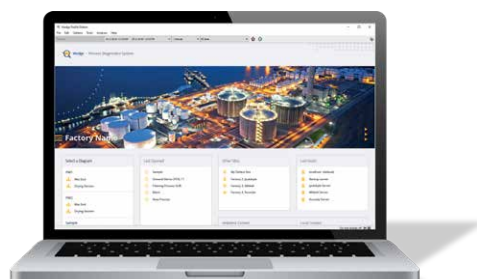
Improve your industrial plant efficiency with the best data-analytics tool on the market. It's easy to use and super-fast. With 25 years of extremely high customer satisfaction, Wedge has earned the trust of global leaders of industry. The system enables you to improve industrial plants' efficiency with ease. Wedge digests all the process data, from multiple sources, for analysis and diagnosis. It uncovers and suggests possible root causes and consequences of process events before they can escalate into big problems. Such power makes Wedge the perfect data-analysis toolbox to maximize your productivity!

## Save costs by addressing issues rapidly

Wedge anticipates upcoming problems and quickly finds the underlying causes. With Wedge, it's easy for you to create views with early warning indicators and that have single-click functions for tackling problems that threaten your process productivity. Whether damage is one minute or one day away, Wedge alerts you and guides your 24/7 team back onto the right track.

## Key benefits

- ▶ Perform a week's data-analysis work in only 15 minutes
- ▶ Shift your mental resources from processing data to solving problems
- ▶ Save costs by addressing issues rapidly
- ▶ Increase process transparency
- ▶ Enable data- and knowledge-sharing, and unlock the full potential of collaboration with colleagues







# Empower your people for efficiency improvement



## Enable data- and knowledge-sharing

Wedge offers configurable user interfaces that make things easy for your process operators, engineers, R&D experts, maintenance staff, and management. Your entire production organization can take an active part in continuous improvement.

Everyone can benefit from Wedge, with no need for valuable data to remain locked behind one or two people. Enable data- and knowledge- sharing, and unlock the full power of true collaboration with colleagues.

## Wedge is easy to deploy and use

The Wedge process-diagnostics tool is ready to run, right out of the box, without a lengthy and risky implementation project. Its no-fuss installation and connections to your data sources don't require programming, any process modeling, or extensive training. With its unprecedented time-data relationship capabilities and virtually unlimited capacity, it forms a solid foundation for your Industry 4.0 architecture.

## Who benefits?

- ▶ Those in production management
- ▶ Everyone involved in process/product development
- ▶ Engineers and R&D experts
- ▶ The quality management personnel
- ▶ Process operators
- ▶ Mill managers

## Perfect for process industry

- ▶ Pulp and paper mills
- ▶ Steel mills
- ▶ The mining industry & metal refineries
- ▶ Fertilizer plants
- ▶ Food & beverage facilities
- ▶ Chemical-industry plants
- ▶ Hydrocarbon refineries
- ▶ Cement & building-material plants

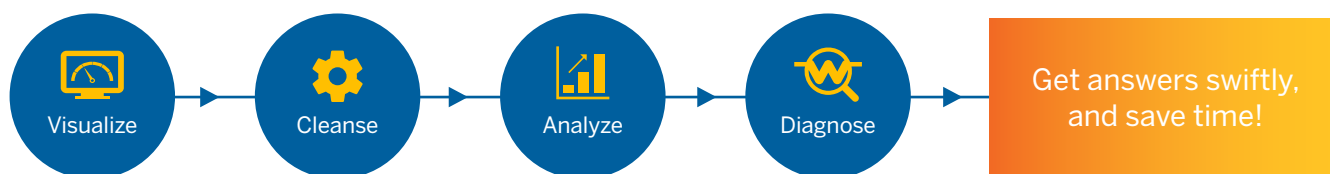
# Find root causes and prevent imminent problems



With Wedge you can make data-driven decisions based on how your process actually works. It anticipates coming problems and quickly finds the root causes.

The root causes and factors behind process downtime, quality deviations, equipment damage, and other undesirable events are often hidden far upstream in the process. This makes them

hard to find via traditional methods. Wedge brings the power of dedicated tools for combing the relevant variables' data, and it quickly pinpoints the "line-up of suspects" for further probing. This dramatically reduces downtime, eliminates undesired process states, and frees your organization to focus on problem-solving and corrections instead of spending hours to locate the right data to examine.



## Visualize

Wedge brings all data, from all sources, to one platform – all automatically and online. Wedge visualizes the process for you, making it easier to see the whole picture.

## Cleanse

Analysis from uncleansed and unfocused raw data is worth nothing. Wedge includes a sophisticated toolset for cleansing and refining the data.

## Analyze

Our experts have hand-picked a comprehensive set of analysis tools for highly effective process analysis in Wedge. Top-notch analysis tools combine with appropriately cleansed data to produce reliable results.

## Diagnose

Wedge uses advanced computer power to detect cause-and-effect relationships within the process being examined, so you get answers to questions about why it's behaving this way.

# A toolbox packed with intelligent process-enhancing features

## Intuitive data-cleansing

- ▶ Removal of “bad data” caused by faulty sensors and downtime
- ▶ Higher-quality analysis
- ▶ Intuitive graphically managed cleansing
- ▶ Automatic corrections

## Intelligent hiding of less relevant data

- ▶ Dynamic removal of irrelevant data from scope
- ▶ Better, faster understanding of process behavior
- ▶ Hiding of certain variable on the basis of process status

## Powerful calculations

- ▶ Easy creation and editing of mathematical formulae
- ▶ Results in the form of virtual variables
- ▶ No need for programming
- ▶ Heightened statistical power through a formula library

## Dynamic compensation for process delays

- ▶ A dynamic time-delay model that compensates for delays and supports reliable analysis
- ▶ A virtual tracer for following raw materials through the process
- ▶ Delay-compensated tracing of end products’ full production history

## A wide range of special analysis methods

- ▶ Analysis of 2D profiles against process data, to inform diagnosis
- ▶ Spectrum analysis and diagnosis
- ▶ Batch analysis
- ▶ Multivariate tools for extremely demanding situations

## Integration of data from multiple sources

- ▶ Consolidation of data from disparate sources along a single time axis
- ▶ A full suite of analytics and diagnostic functions, applicable across all data

## High-bandwidth database operations

- ▶ A high sampling rate, with up to 1 MHz resolution
- ▶ A long history, even spanning decades
- ▶ Super-fast data retrieval
- ▶ Data-retrieval techniques that protect source systems from overload and resulting disturbances

## Extensive language support

- ▶ The opportunity for most users to work with Wedge in their native language – the system is available in nine languages: English, Finnish, French, German, Polish, Portuguese, Russian, Spanish, and Swedish.





# Used by thousands of industrial professionals



“Wedge helped us to save millions”

Wedge is the perfect tool for any manufacturing industry with valuable potential for improving efficiency. It is a great asset for companies having expensive problems in their manufacturing processes.

“Wedge brought two major benefits for Propapier PM2. The first and the biggest benefit is the increased process transparency and reliability: the system ensures that the unknown factors can be detected rapidly. Through this, Propapier achieved the second benefit – process improvement which resulted in two new world production records.”

PROGROUP, Head of Paper Division **Götz Herold**

“Wedge has helped us cut our wastage by 2%. That may seem like a small figure, but for us it means savings of millions of euros – i.e., really significant amounts of money.”

CP KELCO, Operations Director **Jukka Kivimäki**

“Wedge makes possible to analyze disturbances and process changes in an incomparable time, resulting in better solutions and actions in a shorter time to correct problems.”

KLABIN, Process Engineering and Development Coordinator  
**Claudio Ferreria**

“Wedge has integrated into our daily work flexibly. The system has proven very useful for optimization and problem analysis, in particular.”

CABB, R&D Director **Reijo Partanen**



THOUSANDS OF  
USERS



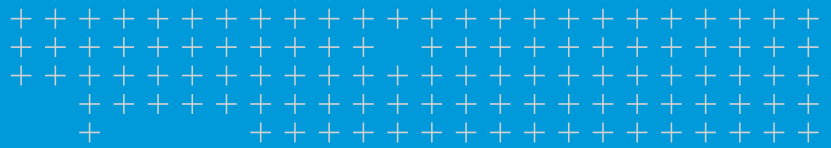
IN USE IN AROUND  
20 COUNTRIES,  
WORLDWIDE



USED FOR MORE  
THAN 200  
PRODUCTION LINES

Read more customer testimonials at  
[wedge.trimble.com/customers](http://wedge.trimble.com/customers)





# Want to try Wedge?

Would you like to try Wedge in your own environment and with your own data? We'll make the deployment process as easy as possible for you.

Please send your contact details to [wedgesales@trimble.com](mailto:wedgesales@trimble.com)

Alternatively, you can contact our nearest expert directly. Contact details can be found at the bottom of the page.



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