## Wedge

### A Fast Industrial Data Analytics Tool



#### **BENEFITS**

- A week's data analysis work in only 10 minutes
- Cost savings through addressing issues rapidly
- · Agile deployment & hassle-free use
- Improved performance by turning data into conclusions

#### **KEY FEATURES**

- Visualize
- Cleanse
- Analyze
- Diagnose





# Powerful data mining & root-cause analysis



#### Improve your industrial plant efficiency

Wedge enables you to easily improve the efficiency of your industrial plant. Wedge digests all the process data from multiple sources for analysis and diagnosis. It uncovers and suggests the possible root causes and consequences of process events before they escalate into big problems. Such power makes Wedge the perfect data analysis toolbox for maximizing your productivity!

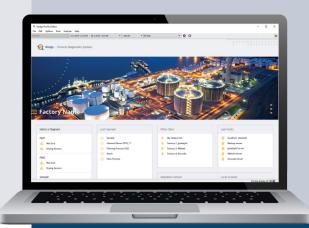
With 30 years of extremely high customer satisfaction, Wedge has earned the trust of global leaders in the industry. For many, it is the best data analytics tool on the market.

#### Save costs by addressing issues rapidly

Wedge is easy to use and super fast. It anticipates upcoming problems and quickly finds the underlying causes. With Wedge, it's easy for you to create views with early warning indicators 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 10 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





# The number 1 choice for all industries with continuous processes



#### Enable data and knowledge sharing

Wedge offers a self-configurable user interface that make things easy for your process operators, engineers, R&D experts, maintenance staff, and mill management. Your entire production organization can take an active part in continuous improvement and use their full potential.

With Wedge, no valuable data is locked behind a handful of people. Wedge enables data and knowledge sharing and unlocks the full power of true collaboration with colleagues.

#### Wedge is easy to deploy and use

The Wedge process diagnostics tool is ready to run, without a lengthy and risky implementation project. With its unprecedented time–data relationship capabilities and virtually unlimited capacity, it forms a solid foundation for your Industry 4.0 architecture.

#### Extensive language support

The system is available in nine (9) languages: English, Finnish, French, German, Polish, Portuguese, Russian, Spanish, and Swedish.

#### WHO BENEFITS?

- Everyone involved in process/product development
- Production and mill managers
- Engineers and R&D experts
- Quality management personnel
- Process operators

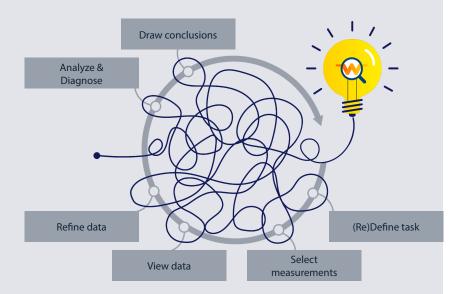
### PERFECT FOR PROCESS INDUSTRY

- 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
- Energy production plants

# Wedge serves the process analytics needs of curious and creative problem solvers

Wedge is developed with curious problem solvers in mind. It is designed to serve the user's mindflow, not the other way around.

It doesn't make you follow its way of thinking and the theoretic process, but flexibly accommodates your needs and your mindflow. Sometimes you skip the data cleaning step, rush into the analysis, and need to clean the data later. Often you realize that critical data is missing from the analysis and want to add it later. Maybe you get sidetracked for a while as your analysis process has exposed something new that you want to dive into. With Wedge this is totally ok!



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### With Wedge you get answers swiftly, and save time!

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 offers the power of dedicated tools for combining relevant variable 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.

#### **KEY FEATURES**

--- 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. Topnotch analysis tools combine with appropriately cleansed data to produce reliable results.

DIAGNOSE

Wedge uses advanced computer power to detect cause-andeffect relationships within the process being examined, so
you get answers to guestions about why it's behaving this

# A toolbox packed with intelligent process-enhancing features

#### Intelligent data cleansing

- Intuitive removal of invalid and irrelevant data
- Graphical and rule-based data refining toolsets

#### Powerful calculations

- Easy creation and editing of soft sensors
- 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 the full production history of end products

### Wide range of data analytics tools and methods

- Analysis of 2D profiles against process data, to inform diagnosis
- Spectrum analysis and diagnosis
- Multivariate tools for extremely demanding situations
- And of course, all the basic tools, like statistics, XY plots, histograms, and cross correlations, just to mention few.

#### Diagnosis

- Ask questions and Wedge provides root cause / consequence candidates
- Process status and time period comparisons
- Pattern recognition methods

### Integration of data from and to 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

- Virtually unlimited capacity on sampling rates, tag amounts, and data history
- Super-fast data retrieval
- Data-retrieval techniques that protect source systems from overload and resulting disturbances

#### Collaboration and knowledge capture

- Real-time communication and collaboration environment
- Evolving process diagrams and notes for capturing and sharing knowledge unawares
- Increased situational awareness and sharing of best practices



# Used by thousands of industry professionals



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.

"Westrock currently utilizes Wedge as a process data analysis tool to find data relationships that would not have been visible without it. Wedge is the best data manipulator that we have seen, which makes rapid analysis of the process data possible."

WESTROCK,

Director of Innovation & Fiber Technology Peter Hart

"Integrating Wedge to our plant systems opens a new era of process optimization, troubleshooting disturbances, and development."

GLENCORE NIKKELVERK, CIO Kai Johansen

"Wedge has facilitated quick responses and speedier support for decision-making. It has been especially valuable in discovering disturbances and identifying opportunities to optimize our processes."

KLABIN, Process Engineer Elielson Batista

"Wedge has given us easy access to our process and product data. It is also a powerful tool for analyzing process data. This helps us in troubleshooting and working with process improvements and product development. Furthermore, it has made us aware of the importance of data quality, which is the foundation of and the key to our way forward working with digitalization and becoming a Smart Site."

HOLMEN IGGESUND,

Technical, Project and IT Manager Peder Hägglund

### Read more customer testimonials

wedge.trimble.com/customers











































































# Want to see Wedge in action?



Would you like to see how Wedge works? We would be glad to give you a live demo. We can also arrange a trial where you can try Wedge in your own environment and with your own data.

We have Wedge experts at your service around the world. Just call the one closest to you, or email us at wedgesales@trimble.com, and we will get back to you as soon as possible.

We are always happy to hear from you!



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