

KNOWLEDGE PILLS

How to generate big data analytics success stories analytics with



RTM Pro

Introduction

In today's age, where data has become the most valuable resource, advanced data analytics software is essential to drive and optimise your factory's performance.

RTM Pro is the tool trusted by large enterprises around the world. It provides great value by offering a wide range of sophisticated tools for data analysis and visualisation, helping organisations to make strategic decisions based on actionable insights.

The great advantage of our software is its intuitive design and ease of use, ideal even for beginners in data analytics. With RTM Pro, you can gain crucial insights into your quality and processes, taking them to a new level of efficiency and productivity.

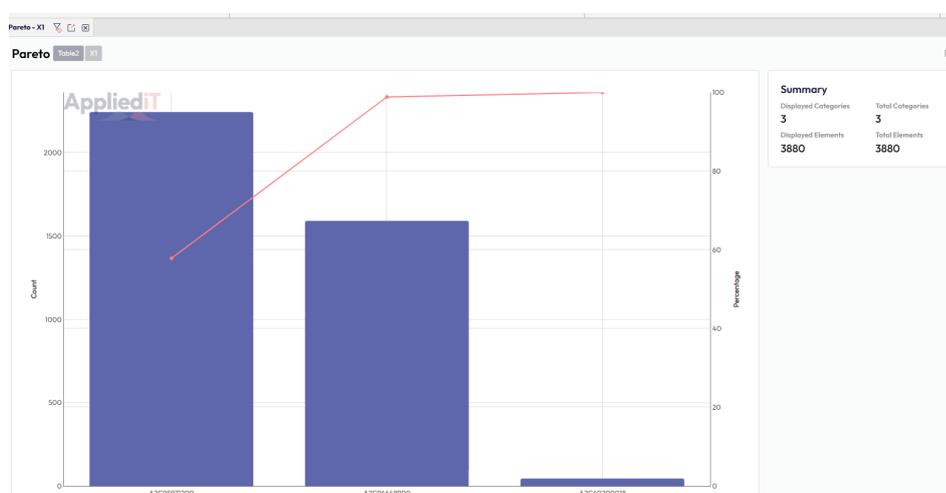
RTM Pro allows you to start any analysis with just three tools

The basic functions to start any analysis through RTM Pro are two essential tools: Pareto y RunChart.

These tools provide an overview of numerical and categorical variables respectively.

- **Pareto:** Selecting this tool launches a Pareto chart in which the different values of a variable are represented in order of frequency. This graph identifies the most frequent values of a parameter and helps to focus on the areas where the most benefits can be obtained.

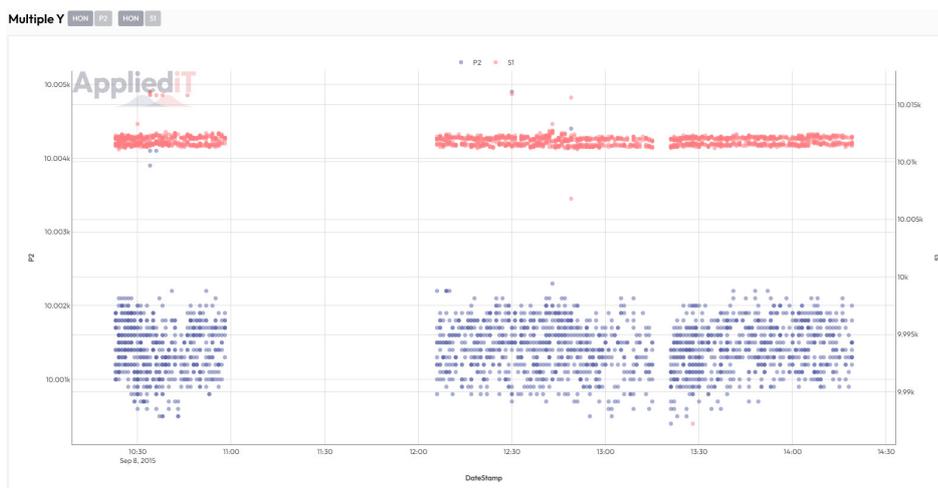
To launch this function, you can directly press [P] or double-click on a categorical variable (marked in blue) from the list of variables.



- **RunChart:** The run chart is the main function to start studying the behaviour of numerical variables. With this function it is possible to study the temporal or ordinal evolution of a variable, identifying peaks, anomalies or significant trends.

It is also possible to know the main statistical values of the data set represented. From this function, and depending on the interest derived from each variable, it is possible to continue the analysis with more advanced functions such as Y's by Category, Multiple Y-Runchart, Cpk, etc.

To launch this function, you can either double-click on a numeric variable (marked in black) in the list of variables.



With these two tools, the possibilities for analysis increase. We can perform comprehensive studies ranging from simple data exploration to the construction of complex predictive models.

Whether we are looking to identify patterns, detect anomalies or understand the relationships between variables, this set of tools provides us with an arsenal to tackle any analytical challenge.

Essential tools for productivity analysis and decision making

RTM Pro is full of functions that allow us to obtain a detailed view of the operation of a process in order to optimise it, to find and understand trends or correlations between different aspects, to identify strengths and weaknesses in order to set realistic objectives... in short, to make data-driven decisions.

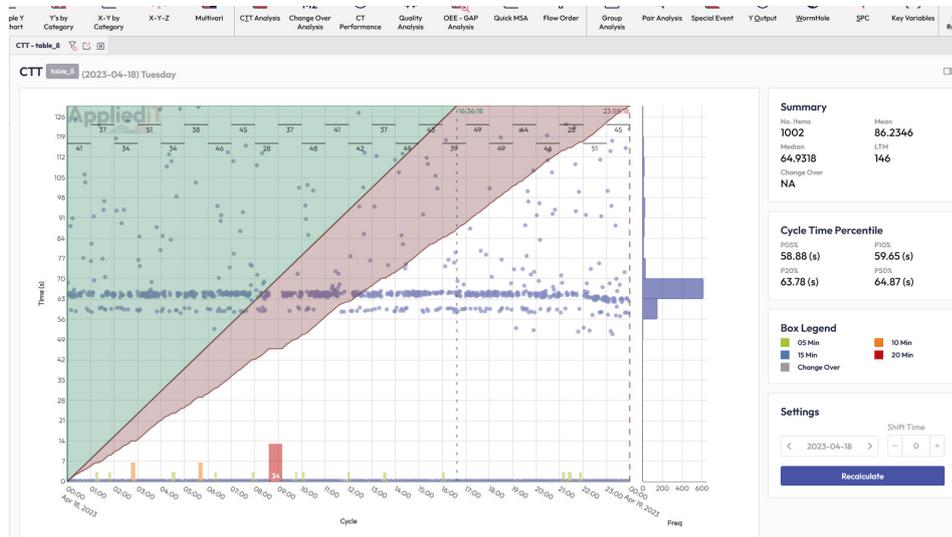
The following are two of the most important functions in this regard:

- **CTT:** It is a powerful tool for understanding and optimising the cycle time of a process.

This function generates a graph where each point represents the cycle time of each part processed at that station, and on which values, trends or significant changes can be detected.

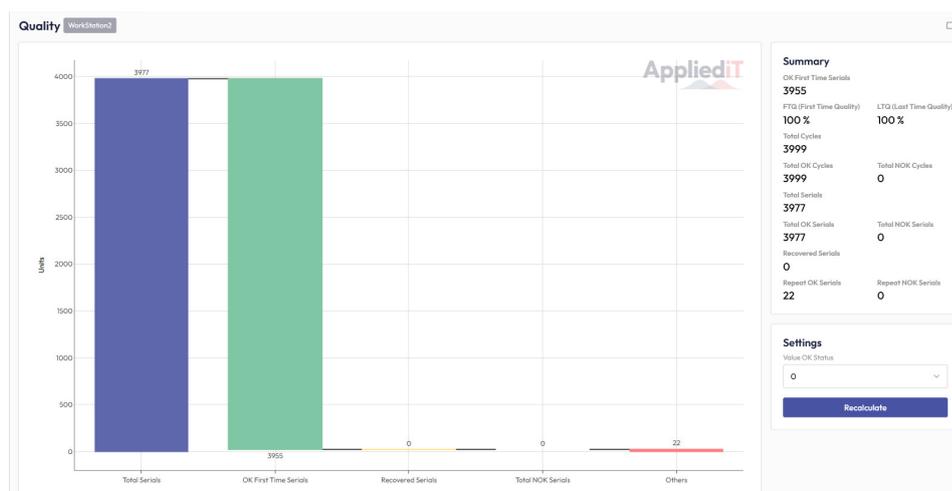
In addition, this function generates much more detailed information on station

cycle times (percentiles, optimal times, stops, station hourly capacity, etc.) which are the basis for optimising station performance.



- **Quality Analysis:** This function is key to identifying quality problems and targeting the specific area with the greatest potential for improvement.

Quality Analysis provides as a result the First Time Quality (FTQ) and Last Time Quality (LTQ) of a given process, but it also generates detailed information on where quality losses occur and whether they are recoverable or not.



Essential tools for comprehensive data analysis

In-depth analytics tools are the driving force behind data analytics success stories. By generating solid evidence and delivering high-value insights, these tools not only support strategic decisions, but also help create powerful stories that inspire others and reinforce the true potential of data analytics.

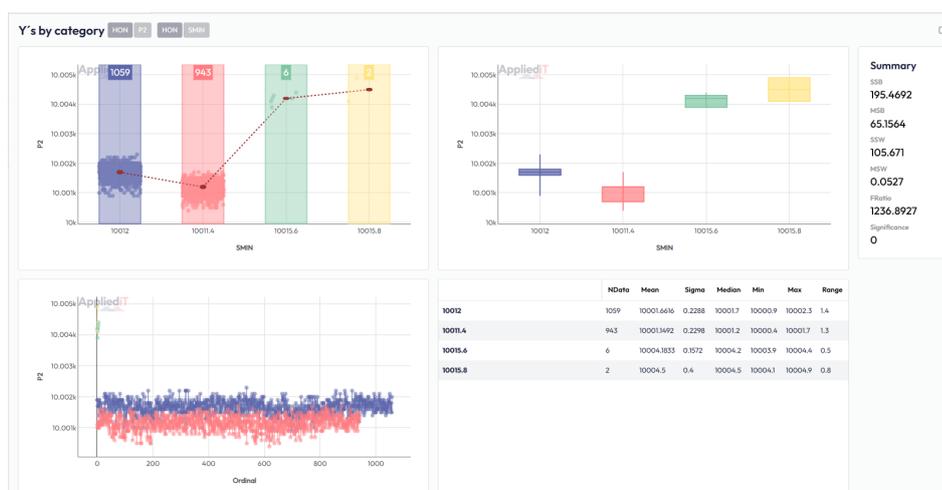
RTM Pro is a powerful tool for performing highly complex statistical analyses in a fast and easy way.

This makes it possible to identify patterns, correlations, trends and results that help in problem solving and process optimisation.

The following are two of the most important functions in this regard:

- **Y's by Category:** This function allows the identification of relationships between numerical and categorical variables, and is especially interesting for recognising trends and patterns that are associated with product characteristics, such as material, batch number, workstation etc.

In addition to a graphical representation in various types of views, this function results in a table with statistical values for each group according to the selected categories.



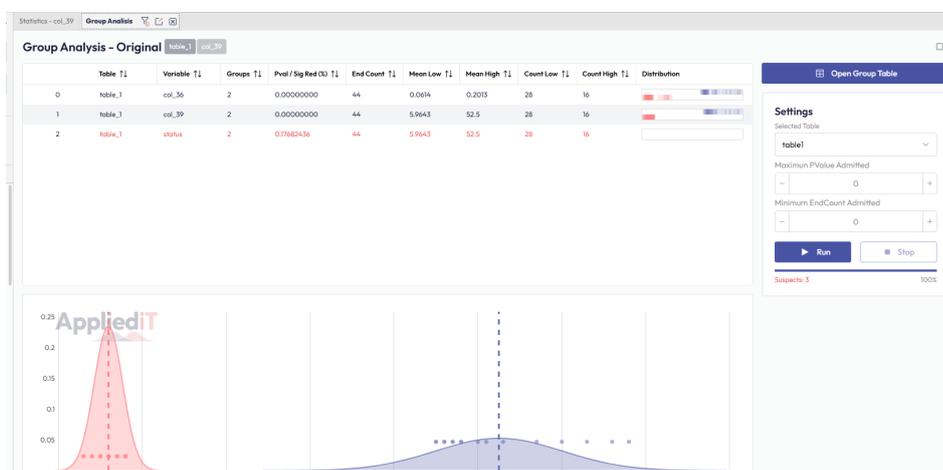
- **Group Comparison:** The ‘Group Analysis’ function allows the analysis of possible correlations between two groups. This function results in a list of parameters that, according to advanced statistical calculations, are suspected to be related for the two selected groups. In this way, it is possible to identify the root cause of a problem, as well as to identify other areas of influence for a deviation.

This function returns a table with the numerical results of the analysis as well as a graphical representation of the distribution of the identified parameters. In the Settings area, it is possible to adjust the statistical sensitivity for the detection of suspects. Most of the RTMPro functions allow you to select groups on which to launch a Group Analysis.

To launch this function, the desired groups must first be selected using the corresponding icons:

- **Box selection:** A rectangle is used to select the groups.
- **Loop selection:** Allows you to draw any figure to select the groups.

After that, launch the analysis with the following icons:



RTM Pro Tips

In RTM Pro, setup is the crucial first step in ensuring accurate and reliable data analysis. It works just like setting up a machine: every part must be in place for it to function properly.

The general configuration must be done with the Settings tool of the Connection module, before starting any analysis.

What should we configure?

- **Record ID:** It is a unique counter that is assigned to each record. RTM needs this variable to work correctly. If we work with data coming from a database, in most cases the variable ID or similar is included.

If you are working with data from an excel or csv file, either this column must be added before uploading the data, or during the file upload process, RTM offers the option to automatically generate the ID column.

- **Date:** Select the variable that most closely identifies the generation date of the record you are working with.

If there is more than one date variable, the user must decide which one is the most appropriate for the purpose of the analysis. The selected variable will be the one used to sort the data each time a time order is involved in the function.

- **Serial Link:** The correct selection of this parameter is essential and refers to the identifier of the part or component being analysed. It can be understood as the proper name of the part in question. Depending on the process, this value is given different names such as Serial Link, DMC; ID, etc.

It is important not to confuse the Serial Link with the Record ID. The Record ID is simply an always incremental counter (which normally increments along with the date), while the Serial Link is the part's own identifier. For example, a part that has been reprocessed three times will have the same Serial Link (because it is the same part), but 3 different Record IDs (because 3 different re-records have been generated for that part).

- **Order By:** This field is used in functions where there is an option to sort the dataset in a certain way. Our recommendation is to select in this field the same variable that has been assigned in the Date field.

The rest of the columns that appear in the Configuration are fields dedicated to specific functions:

- **Machine grouping** → CTT
- **Date2** → CTT
- **Model** → Change Model
- **Status** → Quality Analysis.

For more information about these functions, please refer to the manual.

Settings ✕

Default table
ST1001CylAssem

Language
English

Max Data
32000

Y by Category Mode
Frecuency

Use Alias

Table	Count	Record ID	Date	Serial Link	Order By	Machine Grouping	Date 2	Model	Status
ST1001_CylAssem	30	ID	EVENTDATE	SERIAL	EVENTDATE				
ST	8	ID	EVENTDATE	SERIAL	EVENTDATE				
ST1005_EOL	49	ID	EVENTDATE	SERIAL	EVENTDATE				

RTM Pro is much more than advanced data analysis software. It is a powerful tool that is capable of transforming your factory into a smarter and more efficient environment. With the tools included in our software, you can uncover hidden opportunities, optimise your processes and create great success stories.

With RTM Pro you can:

- **Identifying hidden inefficiencies:** Detect bottlenecks and areas for improvement in your production processes.
- **Optimising productive maintenance:** Anticipate equipment failures and reduce downtime.
- **Improve product quality:** Identify root causes of defects and ensure compliance with standards.
- **Increasing productivity:** Maximise resource utilisation and reduce operating costs.

Turn your factory into a smart and efficient system. Find out how our software can boost your business!

Request a free demo through contact@applieditweb.com



AppliediT combines a multi-disciplinary team of expert IT engineers, data analysts and software developers to deliver operational excellence, data engineering and application development services for data analytics in the industrial environment.

Our goal is to transform the data generated in the industrial environment by people, processes, machines and information systems (ERP, CMS...) into knowledge to improve data-driven decision making, increase efficiency, save costs and optimise production times.

For more information, please visit applieditweb.com