



Minitab

The Leading Provider of Quality Improvement Software

Quality Solutions for Quality Professionals



Today's quality improvement projects are more complex than ever. Leading methodologies such as Six Sigma™ require that they be rooted in an analysis of hard data and produce measurable results, and as their size and scope

have grown, so too has the amount of work required to manage all the people and communications involved.

With all these responsibilities — and your company insisting that your project provide a quick return on investment — the last thing you need is to waste your time and money trying to produce a project using software that wasn't specifically developed to help you. Or by trying to support a range of tools that come from different vendors and have different standards.

Wouldn't it be better if there was one company you could trust to understand your goal of improving quality and that offered you the ideal collection of software, support materials, and services to help you achieve it?

There is: Minitab.

We Are on Your Team



With Minitab, you have one company you can count on to help you face the many challenges of your quality initiative. Whether you have to define the scope of your project or understand and apply the statistics that drive it, we offer you accurate, reliable, easy-to-use software specifically designed to meet your needs. And if it is training or support you need, you can depend on us to provide the highest quality available in the friendliest and most convenient manner possible.

“Minitab listens to their customers, building our suggestions into each new release. I highly recommend MINITAB Statistical Software as the primary tool for data analysis geared toward quality improvement.”

Tim Voegtle
Quality Engineer
AMP Incorporated

We can say this with confidence because for more than 30 years we have been satisfying the data analysis needs of education and quality professionals with our flagship product – MINITAB® Statistical Software. And our customers have responded by making MINITAB the package of choice in hundreds of thousands of quality improvement projects in more than 80 countries. Thousands of distinguished companies such as 3M, LG, General Electric, Siemens AG, Ford Motor Company and the leading Six Sigma consultants use MINITAB every day to make data-driven decisions and achieve world-class quality.

Our customers are loyal because we listen to their problems and respond to their needs. And we have a reputation for excellence because – like our customers – we are committed to it.

Companies that successfully improve quality rely on Minitab

3M
Air France Industries
Alcoa
American Express
Avery Dennison
Bank of America
Becton Dickinson
Black & Decker
Boeing
Bombardier
British Telecom
Brook Hansen
DuPont
Eastman Kodak
Elan Pharmaceutical Technologies
ExxonMobil
Ford Motor Company
General Electric
General Motors
Goodyear
Hewlett-Packard
Honeywell International
International Paper
ITT Industries
J. P. Morgan Chase & Co.
Leading Six Sigma consultants
LG
Monsanto
Multibase
Multibras Eletrodomesticos SA
Nokia
Paturle Aciers
Polaroid
PricewaterhouseCoopers
Reckitt & Colman
Rhodia
Samsung Aerospace
Seagate
Siebe
Siemens AG
Toshiba
Whirlpool

MINITAB® Release 14 Statistical Software for Windows®



The most effective quality improvement projects are the ones in which a thorough analysis of hard data drives the conception, execution, and evaluation of each step. Regardless of the process you are trying to improve – or even the industry in which you are working – you must be able to apply the right statistical methods and trust that your results are accurate.

To succeed, you need a statistical software package that contains all the methods you might use, makes it easy to understand and access them, and helps you illustrate and interpret your results.

You need MINITAB.

Welcome to the Next Generation of Statistical Software

With even more power than our previous release and an easy-to-use design that helps you harness it, MINITAB 14 is statistical software made for the twenty-first century professional. Customizable profiles and graphs that will update automatically when you add new data are just a few of the valuable new features that make MINITAB 14 one of the smartest quality improvement investments you can make.

And the best news is that our latest release includes the same value and benefits our customers have received with every version of MINITAB since our first release more than 30 years ago:

- **The ideal collection of methods –with expanded functionality**
- **Unsurpassed ease of use, even for professionals unfamiliar with statistics**
- **FREE technical support from our highly skilled specialists**
- **Access to exceptional training by statisticians with industry experience**
- **Outstanding customer service from a knowledgeable sales team that puts your satisfaction first**



Download a FREE, 30-day demo of MINITAB 14 at

www.minitab.com/minitab14



MINITAB in Other Languages

Minitab serves customers around the world. We maintain a network of global resellers and sales representatives in more than 50 countries, and offer versions of MINITAB in a number of languages:

MINITAB in French

A full French translation of MINITAB 13 software and support materials.

For more information in French, visit: www.minitab.fr

MINITAB Japanese/English

A complete version of MINITAB 13 with the addition of translated Help, Tutorials, StatGuide, and the MINITAB Quick Reference Guide.

For more information, visit: www.minitab.com or www.minitab.jp

MINITAB Korean/English

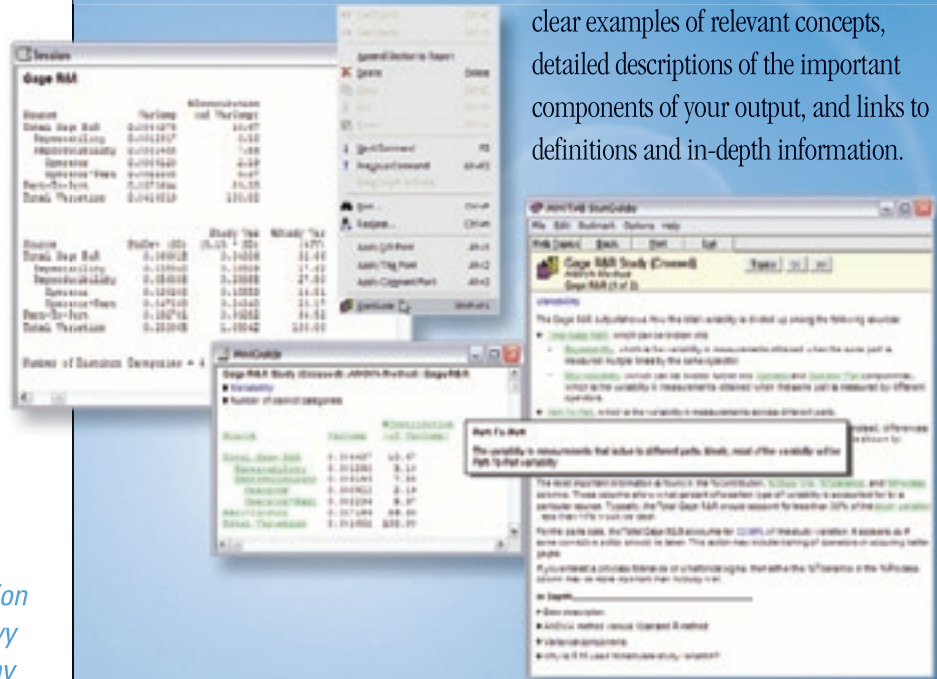
A complete version of MINITAB 13 with the addition of translated Help, Tutorials, StatGuide, and the MINITAB Quick Reference Guide.

For more information, visit: www.minitab.com or www.minitab.co.kr

Features That Make Your Work Easy

▼ StatGuide™

Interpret your analyses with this powerful reference tool that offers clear examples of relevant concepts, detailed descriptions of the important components of your output, and links to definitions and in-depth information.



“MINITAB is intuitive to use, which makes it easy to train all employees in an organization on the application of statistics without the heavy financial burden that so many other packages make on the individual or corporate user.”

Scott Wentz
Program Manager

Project Files

Save all the parts of your MINITAB analysis in one file so you can open the project later and resume your work exactly as it was when you saved it, or even retrace your steps if needed.

ReportPad™

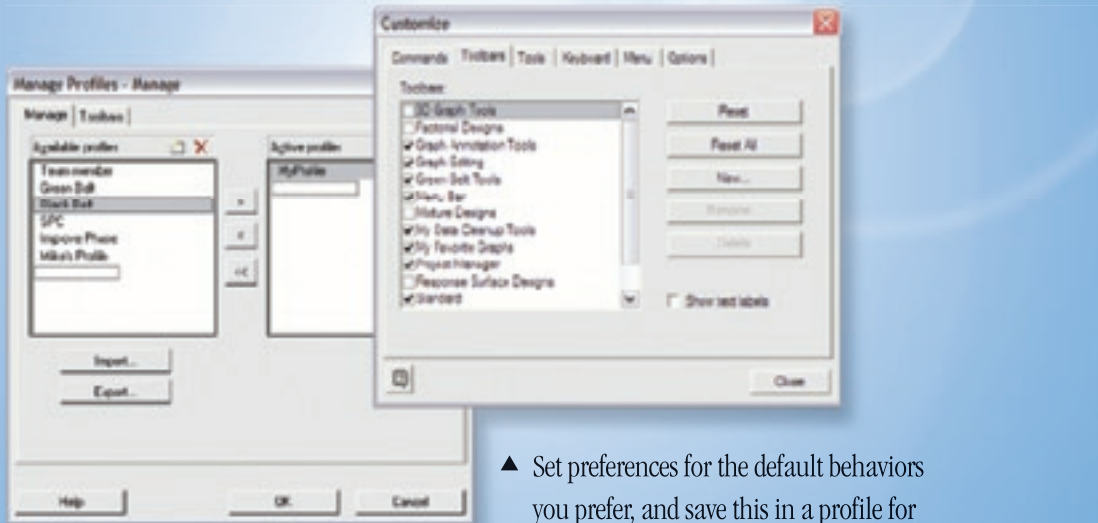
Create a professional report within MINITAB with this useful tool that lets you choose the results you want to highlight and easily assemble them into a coherent, formatted report.

Smart Dialog Boxes™

MINITAB's dialog boxes remember your previous settings so you do not have to repeatedly enter your choices.

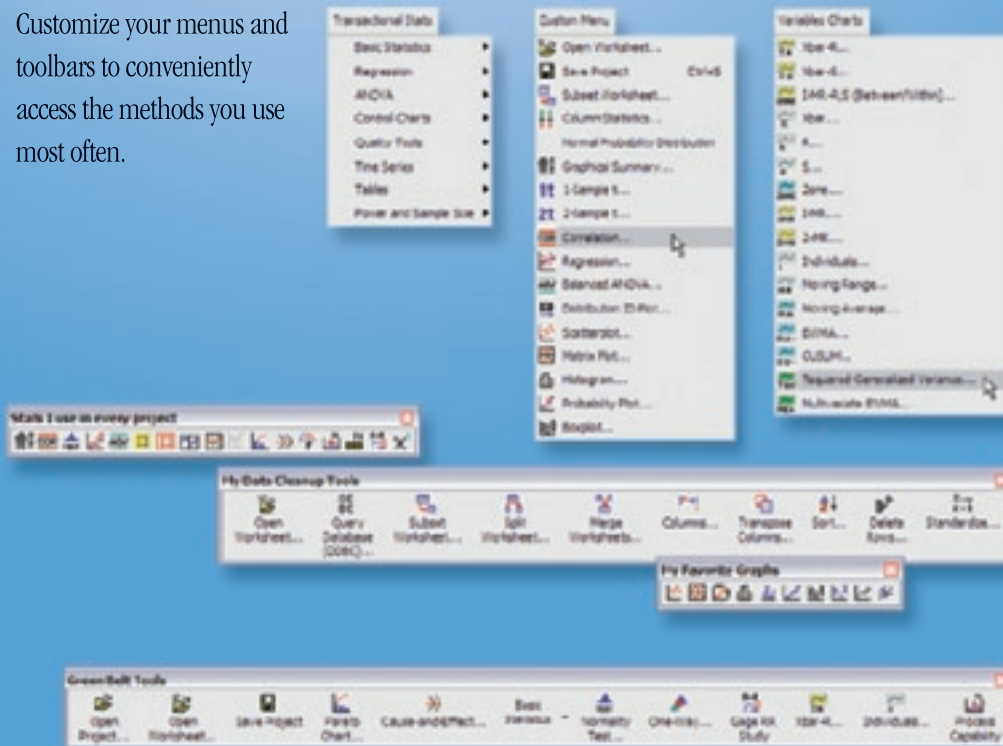
PLUS quick and easy import capabilities and the ability to save all the parts of your MINITAB project – the ReportPad, graphs, session output, even your worksheet – in web-friendly file formats.

Customizable Menus, Toolbars, Preferences, and Profiles



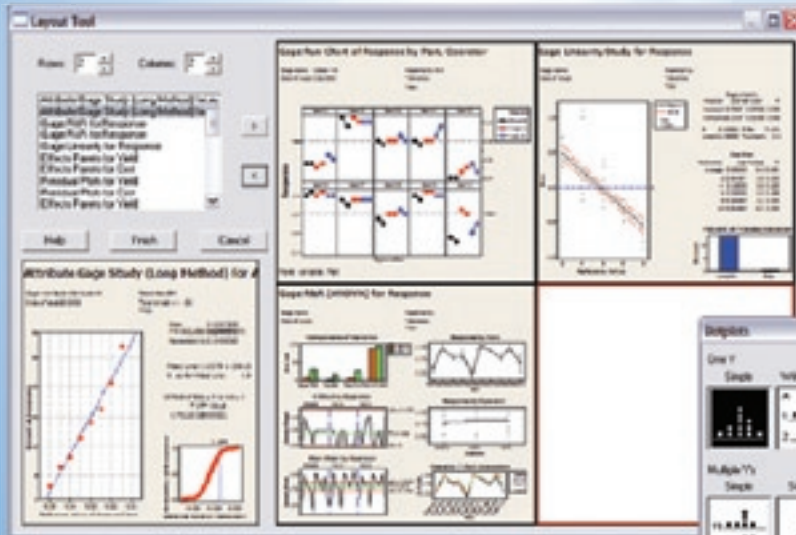
- ▲ Set preferences for the default behaviors you prefer, and save this in a profile for your own or your team's use.

- ▶ Customize your menus and toolbars to conveniently access the methods you use most often.



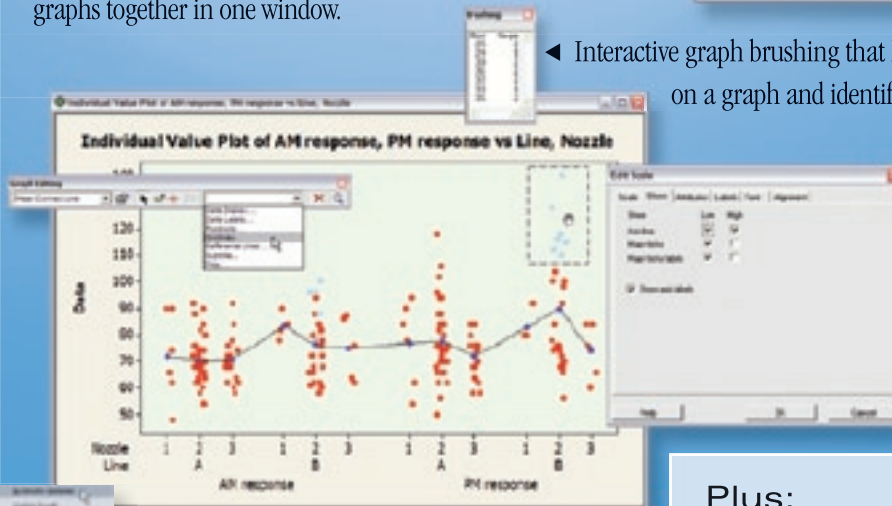
MINITAB 14's New Graphic Capabilities Include:

- ▼ An effortless method to create graphs – select the one you want from a pictorial gallery and use data entry dialog boxes that are simplified for that graph.

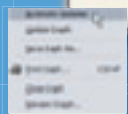


- ▲ An easy way to place several graphs together in one window.

- ◀ Interactive graph brushing that lets you select and subset groups of points on a graph and identify common characteristics of those points.



- ◀ A faster and easier way to edit graphs once you've made them—click on the aspect of the graph you want to change and a dialog box opens that lets you modify it.



- ◀ A dynamic link between a graph and its worksheet that lets you automatically update the graph when data are added or changed.

Plus:

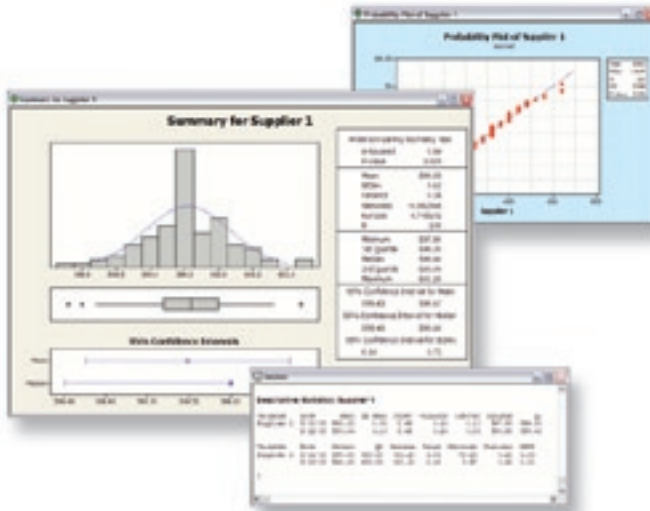
MINITAB gives you precise control over the look of your graphics by letting you modify virtually any graph attribute and then save your preferences as default settings for future graphs. You can alter your graphs' colors, fonts, symbols, fills and more.

The Statistical Methods You Need to Improve Your Processes

"I have always been impressed with MINITAB's ability to load such statistical power into an incredibly user-friendly package. Now, with graphs that will update automatically and an easy-to-use interface and layout tool available to help create them, I'm even more enamored with Release 14. Way to go Minitab!"

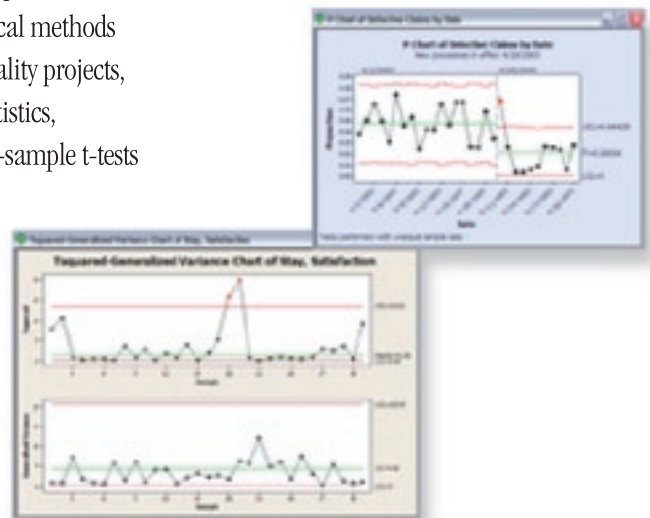
Kunita R. Gear

Continuous Improvement Manager/
Master Black Belt



▲ **Basic Statistics**

MINITAB gives you a comprehensive collection of basic statistical methods you can apply to your quality projects, including Descriptive Statistics, Normality Tests, 1- and 2-sample t-tests and much more.



▲ **Statistical Process Control (SPC)**

Analyze complex data and identify and solve process-related problems using MINITAB's extensive set of SPC tools, including Pareto Charts; Variables, Attributes, and Multivariate Control Charts; and Historical/Shift-in-Process Charts.



◀ Measurement Systems Analysis

Because your data are only as good as the measurement system you use, MINITAB provides you with a complete collection of Gage R&R tools to help identify and quantify sources of variation, and assess your system's precision and accuracy:

- Gage Run Chart
- Gage Linearity and Bias Study
- Gage R&R Study
- Attribute Gage Study
- Attribute Agreement Analysis

▶ Process Capability

Once your processes are in control, MINITAB provides a complete set of process capability analysis tools—including our frequently used Process Capability Sixpack™—to help you determine if they will consistently meet your specifications over time.

MINITAB 14 offers two new capability analyses:

- **Capability analysis for multiple variables** performs an individual capability analysis on many variables and comparatively displays graphical and numerical output.
- **Capability analysis for non-normal data** determines the best-fitting distribution for your data and estimates the capability indices based on the results.



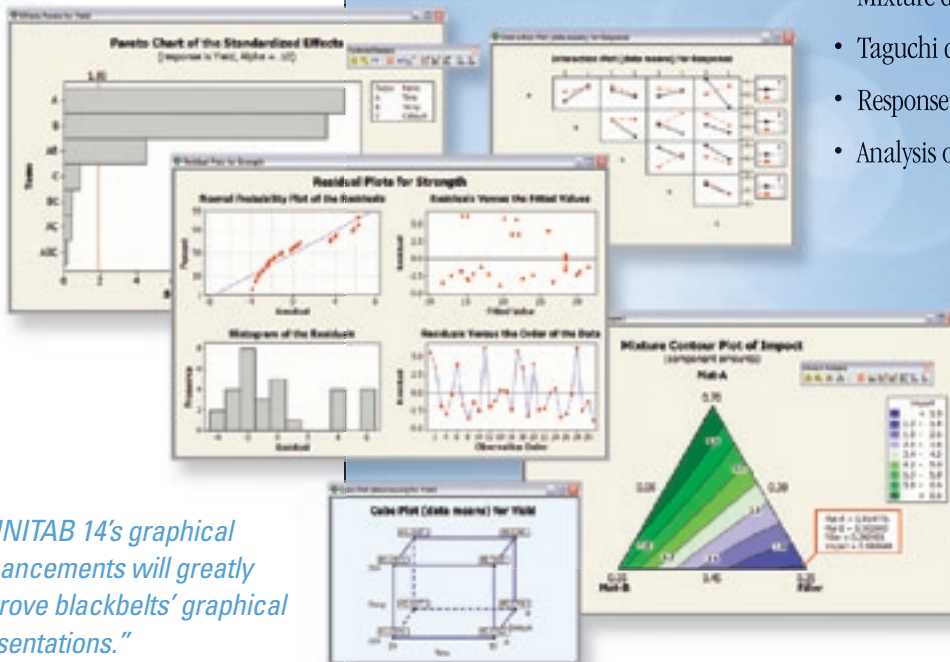
The Statistical Methods You Need to Improve Your Processes

▼ Design of Experiments (DOE)

MINITAB gives you the tools you need to design and analyze all popular types of experiments so you can determine which changes will most improve a product or service's quality and reliability.

MINITAB's DOE tool set includes:

- Factorial designs
- Screening designs
- Response surface designs
- D-optimal and distance-based designs
- Mixture designs
- Taguchi designs
- Response optimization
- Analysis of Variability



“MINITAB 14’s graphical enhancements will greatly improve blackbelts’ graphical presentations.”

Robert L. Perry
Six Sigma Coach

Reliability

Whether your goal is to predict the failure time of a product for warranty purposes, analyze data for repairable systems, or perform Accelerated Life Testing, MINITAB has the tools you need, including the ability to deal with right-, left-, and interval-censored data, parametric and nonparametric methods, and much more.

MINITAB 14 also includes:

- Regression and ANOVA
- Power and Sample Size
- Time Series and Forecasting
- Powerful Data Import, Export and Manipulation
- An Extensive Macro Language

MINITAB Statistical Software Capabilities List/What's New

▶ = New or enhanced in Release 14

Ease of Use

- ▶ Customizable menus and toolbars
- Project Manager: logically organizes analysis
- ▶ StatGuide™ : explains output
- ▶ ReportPad™ : report generator
- Online tutorials
- Smart Dialog Boxes™: remember recent settings
- ▶ Clear, comprehensive Help system
- ▶ Extensive preferences and user editable profiles

Data and File Management

- ▶ Save output and data as HTML
- Unlimited worksheet size
- Import/export: Excel, text, etc.
- ▶ Import Excel workbooks into separate worksheets within a MINITAB Project
- ▶ Import currency format
- ODBC querying
- Autofill
- Hide and unhide columns
- Data manipulation: merge, subset, sort, transpose, change data type
- Find and replace in Data window
- 4000 columns per worksheet
- Matrix functions
- Double-precision worksheets

Graphics

- ▶ New state-of-the-art graphics engine
- ▶ Simplified, pictorial graphics dialog boxes
- ▶ Interactively edit attributes (axes, scale, etc.) and recreate custom graphs with new data
- ▶ Intuitive tool to place multiple graphs on one page
- ▶ Display data from different variables or By groups in panels on the same page
- ▶ Information display tools: tooltips, crosshairs, plant flags
- ▶ Set your own preferences for graph attribute defaults
- ▶ Graphs can update as data change
- ▶ Built-in graphs: a variety of displays available with a single click
 - Scatterplots, boxplots, dotplots, histograms, charts, time series plots
- ▶ Rotating 3D graphs
- ▶ Probability plots, contour plots
- ▶ Interval plots, individual value plots, area graphs, ECDF plots

- Matrix plots, pie charts
- Numerous special-purpose graphs
- OLE: edit MINITAB graphs in other applications
- Graph brushing
- Save as TIF, JPEG, PNG, BMP

Macros and Command Language

- Complete command language
- Powerful macro capability for automating tasks or creating new capabilities

Basic Statistics

- ▶ Descriptive statistics
- Confidence intervals, one- and two-sample t-tests, paired t-tests
- Estimation and tests for one and two proportion problems
- Correlation and covariance
- Normality test
- Test for equal variances
- ▶ Generate basic statistics from summary data

Regression Analysis

- Linear regression
- Polynomial regression
- Logistic regression
- ▶ Partial least squares (PLS)
- Stepwise and best subsets
- ▶ Residual plots

Analysis of Variance

- ANOVA
- General linear model (GLM)
- Unbalanced nested designs
- MANOVA
- Fully nested designs
- Analysis of means
- Multiple comparisons
- ▶ Residual, main effects, and interaction plots

Statistical Process Control

- Run chart
- Pareto chart
- ▶ Fishbone diagram
- ▶ Control charts: XBar, R, S, XBar-R, XBar-S, I, MR, I-MR, I-MR-R/S, MA, EWMA, CUSUM, zone, short run, p, np, c, u
- ▶ Multivariate control charts: T², generalized variance, MEWMA
- Custom tests for special causes
- ▶ Individual distribution identification
- Box-Cox transformation
- ▶ Johnson transformation

- Historical/shift-in-process charts
- ▶ Process capability: normal, non-normal, attribute and batch
- ▶ Process capability for multiple variables
- Process Capability Sixpack™
- Shainin Multi-Vari charts
- Symmetry plot

Measurement Systems Analysis

- Gage R&R: ANOVA and XBar-R methods
- Nested Gage R&R
- ▶ Attribute Gage Study – AIAG analytic method
- Attribute agreement analysis
- Gage linearity and bias
- Gage run chart

Design of Experiments

- Two-level factorial designs
- General full factorial designs
- Plackett-Burman designs
- Response surface designs
- Mixture designs
- D-optimal and distance-based designs
- Taguchi designs
- User-specified designs
- ▶ Analysis of variability for factorial designs
- ▶ Response prediction
- Botched runs
- Mixture plots
- Overlaid contour plot
- ▶ Plots: residual, main effects, interaction, cube, contour, surface and wireframe
- Response optimization

Reliability/Survival Analysis

- Parametric and nonparametric distribution analysis
- Goodness-of-fit measures
- ML and least squares estimates
- Exact failure, right-, left-, and interval-censored data
- Accelerated life testing
- Regression with life data
- ▶ Reliability test plans
- ▶ Threshold parameter distributions
- ▶ Analysis of repairable systems
- ▶ Analysis of multiple failure modes
- Probit analysis
- Weibayes analysis
- Hypothesis tests on distribution parameters
- Plots: distribution, probability, hazard, and survival
- Confidence intervals

Power and Sample Size

- One-sample Z, t, and proportion
- Two-sample t and proportion
- One-way ANOVA, two-level factorial and Plackett-Burman
- Solve for number of center points
- Provide any two of: power, difference, and sample size; MINITAB will solve for the third

Multivariate Analysis

- Principal component analysis
- Discriminant analysis
- Cluster analysis
- Factor analysis
- Correspondence analysis

Time Series and Forecasting

- Time series plots
- Auto-, partial auto-, and cross correlations
- ARIMA analysis
- Trend analysis
- Decomposition
- Exponential smoothing
- Winters' method
- Moving average

Nonparametrics

- Sign test
- Wilcoxon test
- Mann-Whitney test
- Kruskal-Wallis test
- Friedman test
- Runs test
- Mood's median test

Tables

- ▶ Improved cross-tabulation interface with new measures of association
- Contingency tables
- Chi-square test
- Tally
- ▶ Fisher's exact test for 2x2 tables

Simulation and Distributions

- ▶ Random number generator
- ▶ Density, distribution, and inverse cumulative distribution functions
- ▶ Random sampling

“With Minitab Quality Companion, the tool that I need to bridge the gap between data and documentation is no longer missing.”

Wayne Tollefsen

Six Sigma Blackbelt/QA Manager
Electronic Control Unit Division
OMRON Automotive Electronics

Minitab Quality Companion™

As a quality professional, your duties go far beyond analyzing data. You have to design, organize, and implement your project – not to mention manage all the ideas and meetings necessary for it to be effective. And if you have other job responsibilities or are working on more than one initiative, just coordinating the many details of a project can consume all your time and resources.

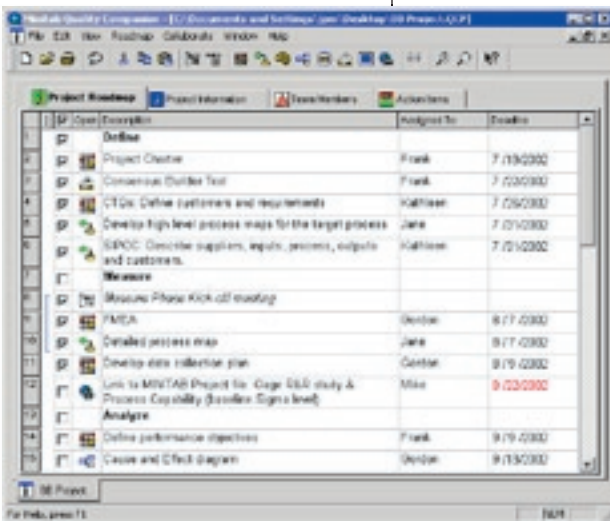
That is why we created Minitab Quality Companion – a collection of soft tools designed to make the non-statistical

tasks related to a quality improvement project easy. Quality Companion offers process mapping, cause and effect diagrams, brainstorm/affinity diagrams, FMEA, CTQ matrix, and much more.



Quality professionals also appreciate Quality Companion because it:

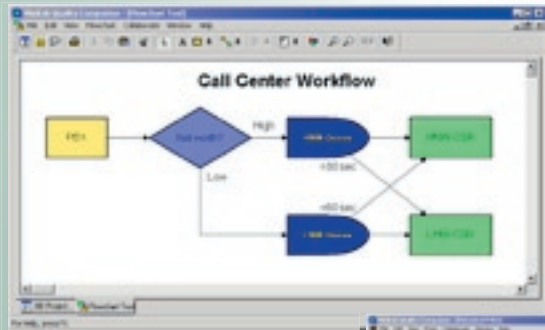
- Is completely customizable, from the forms and tools used to the Roadmap itself. Every component can be modified or created from scratch.
- Provides templates when customization is not necessary, so new users can begin their projects quickly and effortlessly.
- Can be installed on a network drive, allowing all team members to access projects both individually and as a group, and to use the collaborative tools simultaneously.
- Saves all sections of a project and any changes that your team makes in one master file, promoting standardization, collaboration and communication.
- Allows users to save output in HTML format or copy it into other programs.
- Comes with excellent Help documentation.
- Is backed by Minitab’s exceptional, free technical support and customer service.



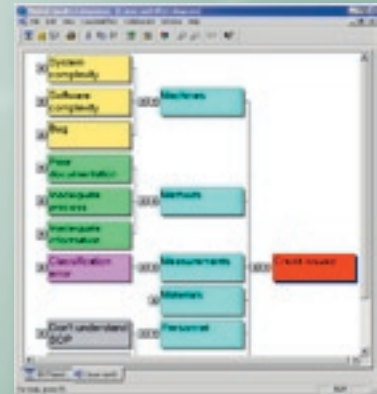
▲ **The Roadmap™:** Quality Companion’s core feature makes it easy to outline the steps in a project and communicate them to others, and offers direct links to the tools available to complete each one.


 Download a FREE, 30-day demo of Quality Companion at www.minitab.com/qualitycompanion

Quality Companion Tools Make Improving Your Process Easy



◀ **Process Mapping Tool:** Construct high-level, detailed and deployment flow charts.

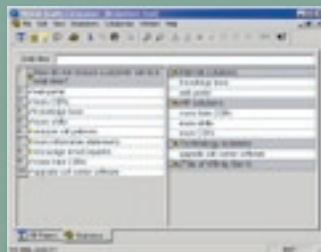


▲ **Cause & Effect Diagram Tool:** Determine the most likely causes of a given outcome and identify areas where variation may occur.

▶ **FMEA Tool:** Conduct Failure Modes and Effects Analysis (FMEA) to anticipate problems with a new process, product or service, and to compare the relative importance of different causes.

▲ **XY Matrix:** Identify an area of focus for the FMEA or pinpoint the initial factors for a designed experiment.

▶ **Brainstorm/Affinity Diagram Tool:** Record creative ideas during a brainstorming session and then organize the ideas into an affinity diagram.



Plus:

Meeting Tool: Manage the components of a meeting including creating an agenda and recording minutes in real time.

Consensus Builder Tool: Reach team decisions using voting and rating tools.

Forms Tool: Create customized versions of forms like Cost of Poor Quality, DOE Planning Worksheet, and more, then save them as templates for your entire organization to use.

Slide Show Tool: Maximize your training investment by incorporating your own training slides into the Roadmap, allowing team members access to training materials when they need them most.

Hyperlink Tool: Link any external file or web address directly into the Roadmap.

Services



Without question, the accuracy and reliability of our software is unsurpassed, but what truly distinguishes Minitab from any other company that offers quality improvement tools is our outstanding service.

At Minitab, customer support means much more than simply helping you install our software. Your satisfaction with our products and your success with your quality initiatives are our priority, and we will always do whatever we can to ensure both.



Outstanding Training



MINITAB Training is one of the fastest and most cost-effective ways to maximize your ability to use our statistical software. We offer public and on-site training courses around the world, and our trainers – among the most highly regarded in the field – are expert statisticians and seasoned professionals with industry experience.

We developed our training materials specifically for quality improvement specialists, and offer two series of classes that focus on either manufacturing or transactional processes, so you can select a curriculum that presents case studies and metrics encountered in your profession.

Technical Support

Registered users of all our software products have free access to our friendly, highly skilled technical support staff. That's right, FREE. No credit card, no hidden fees, no limit on the time it takes to help you. And the support you get is the best in the industry – every member of our technical support team is a statistical specialist experienced in helping customers involved in quality improvement.

If it is easier for you to request help online, you can visit our Minitab Customer Center at <http://customer.minitab.com/> You get the same high quality responses, and we even log your request and our answers so you can refer to them later.

“MINITAB Training was one of the best workshops I have ever attended and will truly help me to begin applying MINITAB immediately. Even though we all had different levels of experience going into the class, everyone learned a great deal.”

Christine Y. Clifford

Director
First Data

“Minitab’s excellent technical support is particularly useful to Six Sigma practitioners.”

Jack West

Six Sigma Blackbelt
Northrup Grumman

Exceptional Customer Service



“Our Minitab renewal went very well as usual. Our Minitab account representatives are always helpful and pleasant.”

Sherry Harvey

License Coordinator for Seebeck
Computer Center
University of Alabama-Tuscaloosa

The Minitab sales team is as committed to your quality improvement as you are. Our representatives learn how your company will use our software and then determine the best and most affordable solution for you.

Whether you are a small business or a complex, global operation, you can count on our sales team to:

- Offer you the most flexible licensing options in the business with great volume pricing.
- Make ordering easy and then follow-up to guarantee your satisfaction.
- Oversee a smooth and cost-efficient deployment, regardless of your company's size.
- Communicate with you regularly and provide enhanced solutions as your company's needs grow and change.

We also have Independent Local Representatives in Europe, Asia, Australia, and Central and South America who provide local sales, customer service, training, and free technical support in their countries' local languages. And we send all interested customers free newsletters that are filled with technical tips, customer success stories, interviews with leaders in quality improvement, and much more.

Six Sigma Expertise

It is no accident that MINITAB is the statistical package used by the leading Six Sigma consultants to train their global clientele, or that MINITAB has been used in virtually every major Six Sigma initiative around the world. Since 1996, we have been continuously improving MINITAB to meet the unique needs of Six Sigma practitioners, and our sales personnel bring years of Six Sigma knowledge and experience to every customer served.

We also have a Six Sigma Business Coordinator and staff who dedicate themselves exclusively to Six Sigma



customers. They keep abreast of the latest advances in the movement and work closely with Six Sigma consultants so we can respond quickly to the demands of their clients.

Minitab Online

Minitab offers a wealth of information and support on the web including an Answers Knowledgebase of frequently asked questions, the latest product

information, statistical resources, and free maintenance updates. We also have websites devoted exclusively to Japanese and French customers.

You can visit us online at:

- www.minitab.com
- www.minitab.jp
- www.minitab.fr



Contents

Software 4

MINITAB Release 14 Statistical Software for Windows® 4

MINITAB in Other Languages 5

MINITAB in French

MINITAB Japanese/English

MINITAB Korean/English.....5

Ease of Use Features.....6-7

StatGuide6

Project Files.....6

ReportPad.....6

Smart Dialog Boxes6

Import/Export Capabilities.....6

Customizable Menus, Toolbars,

Preferences, and Profiles.....7

New Graphics Capabilities8-9

Statistics to Improve

Your Process10-12

Basic Statistics10

Statistical Process Control10

Measurement Systems Analysis11

Process Capability.....11

DOE.....12

Reliability12

MINITAB 14 – Capabilities/

What's New..... 13

Minitab Quality Companion 14

Roadmap14

Process Mapping Tool15

FMEA Tool15

Cause & Effect Diagram Tool15

XY Matrix15

Brainstorm/Affinity Diagram Tool15

Meeting Tool15

Consensus Builder Tool15

Forms Tool15

Slide Show Tool15

Hyperlink Tool.....15

Services 16

MINITAB Training 17

Technical Support..... 17

Customer Service 18

Six Sigma..... 19

Minitab Online..... 19

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