

Are you satisfied?

More than a popularity contest, *Control Engineering's* customer satisfaction study quantifies user comfort, or lack thereof, with 92 control and instrumentation manufacturers across 16 product categories, related software, and services.

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Determining which control and automation companies provide the best products and services is a lot like trying to "win big" in Las Vegas. Just when you think you have a system that's working, something (or everything) changes and the house wins it all back—and then some.

In the world of control and automation, circumstances that often change, or at least influence, the quality and availability of products and services users purchase include downsizing, new technologies and obsolescence of others, mergers, divestures, relocated support centers and manufacturing facilities, and changes in a company's marketing direction. In short, just about the time users get comfortable doing business with a manufacturer, it seems something changes.

Survey architecture

So how can the level of user satisfaction with automation products and services be determined? At *Control Engineering*, we combined editorial staff expertise with our extensive library of past product focus studies, as well as the results of our 2002 purchasing study to identify 16 product categories for inclusion in a comprehensive customer satisfaction survey. (See "Product categories" sidebar.)

Within each product category, five

customer satisfaction question areas were developed:

- Products;
- Factory repair services;
- Software upgrade services;
- Technical support; and
- Factory recalibration services.

Survey questions probed such aspects of service as ease of installation and setup/configuration, price, legacy product support, ease of identifying problems, turn-around time, and ease of reaching the correct service support person. (Visit this article online at www.controleng.com to view the complete questionnaire.)

Conducted online, this survey invited a select group of *Control Engineering* subscribers to rate the products and services of up to three manufacturers. More than 1,000 participants provided 2,034 responses about the level of satisfaction they are receiving from 92 manufacturers.

Most needed services

When purchasing a product, especially a technology-based product, there are often nagging product quality-related questions. Things like how often should I expect to need:

- hardware repairs;
- software upgrades and bug fixes;
- to contact technical support; and/or
- to use factory recalibration services to satisfy regulatory or internal quality requirements?

Answers to such questions are elusive, and it is of little help to know an industry average. However, knowing other users' experiences for specific product categories could be very helpful. This is one of the principal reasons we developed this survey. (See table: "Frequency of required services.")

As the data in the table below indicate, the need to contact technical support ranks highest among services used. Do the quality of documentation, ease of installation, and/or ease of product setup/configuration contribute to technical support contacts? Not according to survey results.

Eighty-one percent of distributed/hybrid control system respondents, 83% of PLC hardware and software respondents, and 83% of operator interface hardware and software respondents are very or somewhat satisfied with the quality of the documentation manufacturers provide.

More than 90% of those same respondents (91%, 97%, and 92%, respectively) are very or somewhat satisfied with the ease of installation of products in those same three categories.

When respondents rate the ease of setup/configuration, again, customer satisfaction is excellent, with 84% reporting they are very or somewhat satisfied with distributed/hybrid control systems, 90% with PLC hardware and software, and 86% with operator interface hardware and software.

Customer Satisfaction Survey

So why do customers so often contact technical support?

According to several manufacturers' front-line support center staff, a lot of calls received come from users who don't or won't take time to look up and read the documentation.

Please hold

When users need help and call the manufacturer's technical support center, they sometimes face a greeting like, "All customer service representatives are busy helping other customers, please..."

As far as most users are concerned, leaving a message or waiting on hold is when the "response clock" starts ticking and is the first quantifiable measure of customer satisfaction.

To the question, "From the moment you requested technical support for this manufacturer's product, how quickly did you receive a response?" 71% of survey respondents indicated they were contacted within the same day or less. (See, "Average time for tech support to call back" graph.)

However, don't expect that sort of response from every manufacturer in every product category.

For example, in the valve positioner product category, 22% of respondents indicated they waited more than two days for a return call, and 5% of respondents inquiring about block valves and another 5% inquiring about PC-based control products indicated they never

received a return call.

Once a user reaches the manufacturer's technical support group, three things become key measures of customer satisfaction for that specific call:

- Knowledge and troubleshooting skills of the tech support person (See "Technical support's troubleshooting abilities" graph);
- Willingness of tech support to try everything (See graph of same name); and
- Satisfaction with the resolution or solution (See graph of same name).

As the graphs illustrate, users are very satisfied with the technical support that manufacturers provide.

Good products, but...

That same level of customer satisfaction extends to products manufacturers provide.

Forty-nine percent of survey respondents indicated they are very satisfied with products they purchased, and another 44% say they are somewhat satisfied. However, respondents are less satisfied in the areas of product upgrades and legacy product support. Fifty-nine percent indicated "somewhat satisfied" with manufacturer handling of product upgrades, with 18% dissatisfied. Numbers are similar in the area of legacy product support where 55% are somewhat satisfied, but 18% are dissatisfied.

Heavy-iron products—drives, motors, and valves—appear at the top of the list when it comes to product

upgrades and legacy product support. And that's to be expected. After all, it's far easier for manufacturers to make the motor base and shaft alignments of a new motor match an old motor than it is for a new software-intensive product to seamlessly incorporate previous application configurations.

Despite what customers often say at user group meetings, survey results indicate users do understand and appreciate the complexities manufacturers face when balancing the introduction of new software technologies and supporting the installed base. That's not to say users won't keep asking for software miracles, but it does indicate most users empathize with manufacturers—at least to some degree.

Perhaps that helps explain why users indicated a somewhat neutral attitude (equal amounts of somewhat satisfied and somewhat dissatisfied) when asked about product pricing, but leaned more toward "very satisfied" when asked about the value-for-the-dollar of a manufacturer's product.

User loyalty

Since manufacturers often seek to augment user loyalty, the survey asked, "If your manager recommended *against* future purchases of a product from this manufacturer, which best describes how you would respond?"

■ Strongly support or recommend continued use of the manufacturer's product;

■ Somewhat support or recommend the manufacturer's product;

■ Comply with your manager's recommendation to no longer purchase the product; or

■ Support or recommend a different manufacturer.

When the averages across the 16 product categories are totaled, 46% indicated a strong willingness to support or recommend the "out-of-favor" manufacturer; 36% say they would somewhat support the manufacturer; 12% indicated they would comply with the manager's recommendation; and 6% say they would recommend a different manufacturer.

For most manufacturers, those numbers bode well for customer loyalty and are likely to translate to

Frequency of required services

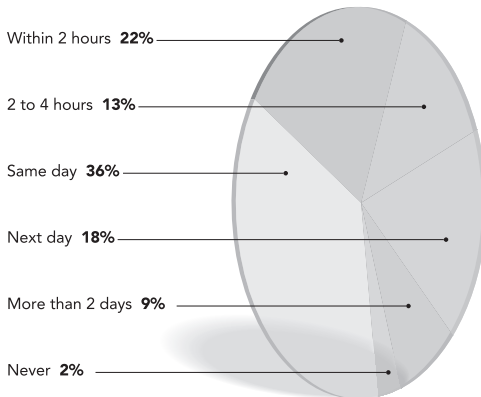
Product category	Hardware repairs	Software upgrades and/or bug fixes	Contact technical support	Use factory recalibration services	Never used any of these services
Distributed/hybrid control systems	28%	47%	69%	1%	21%
PLC hardware and software	15%	30%	53%	2%	38%
Operator interface hardware and software	18%	44%	55%	1%	34%
I/O products	15%	28%	49%	1%	43%
Sensors and transmitters (flow, level, pressure, etc.)	11%	9%	37%	9%	56%
AC adjustable-speed drives	26%	19%	50%	2%	39%
Control valves	20%	7%	41%	8%	49%

Note: Totals are greater than 100% because some users require multiple services.

income during 2004. Survey results indicate 89% of respondents are likely (42%) or very likely (47%) to continue buying from their current manufacturer in the next 12 months. However, the same can't be said in the operator interface hardware and software category, where 38% of respondents indicated they would follow the manager's recommendation; and another 12% would recommend a different manufacturer.

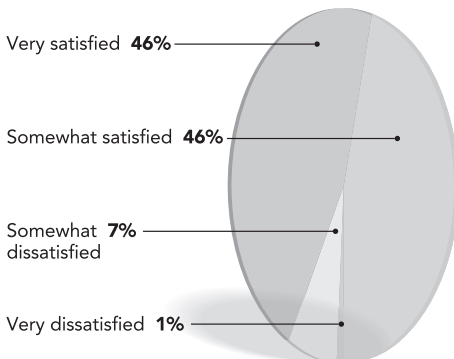
Some of the harshest comments appeared in the operator interface category. A couple of examples: "Poor tech support. Very limited script set with poor documentation. They advertise ActiveX container functionality, but it's very difficult to make it function properly, and tech support lacks knowledgeable people"; and "The manufacturer should do more than just listen to issues about product problems; they should actually correct the problems."

Average Time for Tech Support to Call Back



Source: Control Engineering and Reed Research

Technical Support's Troubleshooting Abilities



Source: Control Engineering and Reed Research

At the other end of the user-loyalty spectrum is process analysis and loop-tuning software. Here, 91% of respondents indicated they would strongly or somewhat support the manufacturer the manager deemed unfavorable. Eight percent would comply with the manager's recommendation, and no one said they would recommend a different manufacturer.

Work together

The information provided by this survey also has implications for the customer service you provide. After all, as engineers, each of us is asked to provide technical support. For some, the request comes from external customers; for others the request comes from co-workers. Regardless, "the customer" is generally frustrated.

The Service and Support Professional Association (www.theSSPA.com) recommends that following these rules can help soothe a "customer."

- Listen up. Stop everything and listen to what the customer is saying. This focused attention helps you answer questions more effectively and also sends a message that the customer has your undivided attention.

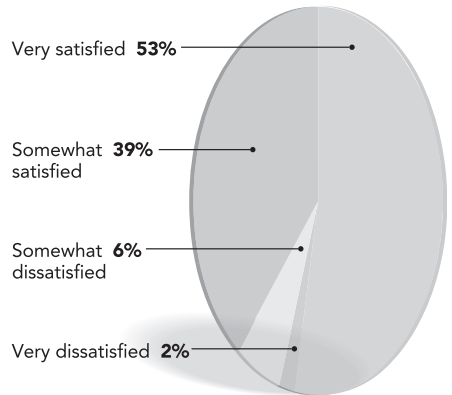
- Count to three. Be sure the customer is completely finished speaking before responding. Pausing just three seconds after the customer has finished talking ensures they have finished and are ready to listen to you.

- Use first person. Avoid using second person near the beginning of your statements. Instead of using phrases such as "You should...", use phrases such as "Here's what I suggest." This approach tends to make the customer less defensive and instills a feeling of teamwork.

- Repeat after me. It was rude when your little brother or sister did this to tease you, but it makes sense when trying to help others. Repeating what the customer says helps ensure you understand the situation.

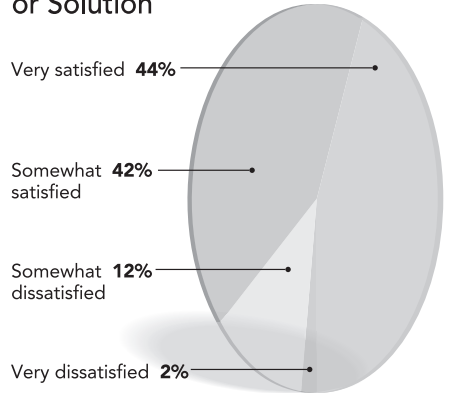
- Ask probing questions. If you need more information, ask questions that need more than a "yes" or "no" answer. Not only will you

Willingness To Try Everything



Source: Control Engineering and Reed Research

Suitability of the Resolution or Solution



Source: Control Engineering and Reed Research

get details that help you resolve the customer's problem, but you're also likely to diffuse what's left of the customer's anger.

- Don't take the customer's anger personally. Do what you can to resolve the problem and then let it go. Even if you are unable to turn your customer's frown upside down, at least you'll still be smiling at the end of the day.

Oh, and when you become the frustrated customer, try to apply these same rules.

As the economy heats up, spending for control and automation products will increase, as will the calls to manufacturers' support centers. What remains to be seen is whether the manufacturers that reduced staff during the past few years will re-staff in time to handle the additional calls.

Gambling in Las Vegas is a game. Developing and executing a winning customer satisfaction strategy isn't. Is your company winning or losing? **ce**

Best products and services

Which control and automation manufacturers provide the best products, repair services, software upgrades, technical support, and factory recalibration services? The envelopes, please! In December 2003, *Control Engineering* subscribers completed a comprehensive survey designed to determine user satisfaction across 16 product categories.

A complex weighting algorithm was developed that produced customer satisfaction index values for each survey area.

Index values were then combined to identify manufacturers with the best overall index within each product category. (How to read the index numbers below: The number by each category headline is the category's average index value. The number by the vendor name is the index value for that vendor. An index value of 100 is the highest possible score.)

The manufacturers receiving the highest overall customer satisfaction index values in each product category are:

AC adjustable speed drives (59.80)

- > Yaskawa Electric/Magnetek (67.81)
- > Rockwell Automation (65.82, tie)
- > Mitsubishi Electric (65.82, tie)
- > Danfoss (64.68)
- > GE (62.29)

AC motors (73.28)

- > Marathon Electric (78.56)
- > Baldor Electric (76.80)
- > Rockwell Automation (76.36)
- > SEW Eurodrive (76.27)

Block valves (73.72)

- > Apollo (89.77)
- > Swagelok (85.70)
- > Emerson Process (Fisher) (75.07)

Control valves (63.59)

- > Honeywell (69.84)
- > DeZurick (68.95)
- > SMC (67.83)
- > Emerson Process (Fisher) (66.96)

Distributed & hybrid control systems (56.88)

- > Schneider Electric (65.24)
- > Emerson Process (63.16)
- > Rockwell Automation (60.93)

I/O Products (62.33)

- > Mitsubishi Electric (73.81)
- > Rockwell Automation (65.33)
- > AutomationDirect (64.72)
- > National Instruments (64.28)

Motion controllers & related devices (59.49)

- > Parker Hannifin (75.16)
- > Yaskawa Electric (74.57)
- > Emerson Industrial Automation (Control Techniques) (71.15)
- > Baldor (68.04)

Operator interface hardware & software (55.53)

- > Dell (68.36)
- > AutomationDirect (67.70)
- > Advantech (66.14)
- > Compaq/HP (65.48)

PC-based control (57.88)

- > National Instruments (68.89)
- > Emerson Process (68.81)
- > Rockwell Automation (65.14)
- > Entivity (63.18)

Photoelectric & proximity sensors (73.35)

- > Cutler Hammer (86.19)
- > Banner (82.06)
- > Rockwell Automation (74.91)

PLC hardware & software (63.62)

- > DirectSoft (81.59)
- > AutomationDirect (74.59)
- > Keyence (77.50)
- > Omron (70.08)
- > Rockwell Automation (70.03)

Process analysis & loop tuning software (66.95)

- > Rockwell Automation (84.87)
- > Expertune (76.35)
- > ABB (74.09)

Sensors & transmitters (66.86)

- > ifm efector (82.50)
- > Emerson Process (73.57)
- > Omega (71.64)
- > ABB (69.42)

Solid-state motor starters (73.76)

- > Cutler Hammer (75.45)

Valve positioners (69.44)

- > Honeywell (77.50)

Vision systems (59.45)

- > Cognex (65.47)
- > National Instruments (63.57)
- > DVT (63.53)

Note: Manufacturers needed to receive 1% of the total responses or three responses, whichever was greater, in a product category to qualify for inclusion on this list.

