

Industry Watch 

WANTED: SKILLED CUSTOMERS

The only experts are the equipment engineers and manufacturers



BY STEVE SADLER

Forget about the crisis of insufficient ranks of skilled labour for a minute. What we really need are more skilled customers!

This provocative statement will not win over many new customers, yet amongst machinery and equipment builders, a lot of heads will be nodding. It wasn't that way a decade ago, and I hope it won't be that way in the future.

So, what exactly has happened from the perspective of equipment builders? Why are our customers so inexperienced, and what are the consequences of this new reality? Let's take a look at what it used to be like in the late 1980s.

During the latter half of the 1980s, most processing and manufacturing companies had in-house manufacturing and/or plant engineering and maintenance departments. They were comprised of a mixture of engineering school graduates and technical people with many years of experience. They had seen and done that before. They had their own standards and designs. They knew, by experience, what worked for them and what didn't in their facilities. They could and would discuss their requirements with their suppliers and together innovation was encouraged.

They bought equipment that had the quality they needed. Justification to purchase one product over another was based on several factors. They bought "best value" and weren't adverse to sticking out their necks and recommending the higher-priced equipment because they had the experience to justify the premium as "best value." Don't get me wrong – price was important, but so were all the other factors of quality: dependability, suitability, engineering support, availability, etc.

To support this "everything matters" all-inclusive approach, on the part of the manufacturing customers, the equipment engineers and builders had a complimentary group of engineers – both of sales and technical backgrounds. There was a general belief then that it was the supplier's responsibility to keep the customer up-to-date technically, so they gave seminars and spent

considerable sums on product development, because they knew their customers wanted the most productive machines and were willing to pay for it.

Consequences – the top and the bottom

The other side of the issue was the general economic slowdown of the late 1980s and early 1990s. Many companies flattened their structure to save dollars. This meant the downsizing or the complete elimination of the senior technical and supervisory levels of plant engineering – ultimately, all that was left was just the top and the bottom. This was the beginning of outsourcing. It made sense to the top management and they sold it to the shareholders. Their thinking was why retain expensive middle-level management when you can outsource the know-how when you need it – just contact your local consultant for a "rent-a-body."

On paper, that approach looked good, but the reality was unrealistic because there was no one left in their organization to select the "expertise" and the experience factor the customer required for those specialized areas. So, the selection of "the right consultant" was made on cost or fee charged, and the consultants, in turn, selected staff with general knowledge and at a cost that allowed them to be competitive, since price was frequently the primary factor in making a consultant selection.

The assumption by the customer that the consultant could do the same job as their former in-house engineering department was totally unrealistic. Consultants are generalists (to be polite) and know next to nothing about the equipment builder's product or their client's technical processes and know-how. To be absolutely fair, how could they? So, when the time came to select the equipment manufacturer, the consultant used the same selection criteria by which they were selected – price!

At the beginning of the slowdown, many of the laid-off plant engineers became redeployed in the equipment manufacturers' operations, but as the slowdown continued, the senior engineers joined the ranks of the early-retired.

So the dynamics of the marketplace changed when it came to vendor or supplier selection. Previously there had been a balance between the customers and vendor/suppliers, in terms of human and technical resources, to evaluate their own requirements as well as the recommendations made by the suppliers in their proposals. All that knowledge was lost to the manufacturing sector – both to the customers and, to a much lesser

degree, the machinery builders.

The equation was becoming unbalanced in that the equipment manufacturer had significantly more expertise in his specialty than did the customers – so much so that the customer was having difficulty in discussing and evaluating the equipment proposals from the traditional criteria of suitability, engineering design, production output, life cycle, maintenance cost and price.

So, you have generalists as consultants, generalists as customers (managers and purchasing agents) and experts as equipment engineers/manufacturers. Consequently, the decision became more and more based on price. The old experienced manufacturing engineer was no longer in the picture, and the decisions were becoming more and more based on price by consultants/administrators/purchasing/buyers personnel – not manufacturing or maintenance engineers.

To claim that the effective life of your equipment is twice that of a competitor's machinery falls on deaf ears. Everything is price-price-price, and it's understandable because price speaks for itself – it doesn't have to be defended or justified, as would a "best value" choice, which is, say, 25 per cent higher than the lowest price.

What is Return On Investment (R.O.I.)? It consists of improvements in the following:

1. Volume of production
2. Operating costs – reduced labour, energy consumption, space, etc.
3. Reduced downtime
4. Reduced maintenance cost
5. Standardized parts inventory

It does *not* consist of only Vendor No. 1's price versus Vendor No. 2's price, simply because no two pieces of equipment are engineered exactly the same. Without the knowledge of the above five points, you cannot have a meaningful evaluation of R.O.I.

Many capital equipment budgets are totally isolated from maintenance or operations budget. Therefore, what appears as a good capital (cheapest equipment price) investment – once the maintenance or operations (labour) expense is added – turns out to be a very poor investment after a few years. However, with the high turnover of managers, many are not around long enough to benefit or suffer from the results of a good or poor R.O.I. on plant or equipment.

Supplier reaction

As more and more contracts were being awarded to the "low bidder," it became apparent to the equipment manufacturers that they had to take the following actions to stay in business and prosper:

1. Reduce the engineering overhead

in the equipment price by curtailing R&D in new equipment design and applications. Reduce number of design seminars and redirect design efforts to "cost reduction" at the cost of everything else.

2. Move away from the exclusive use of professional engineering sales reps, to less technical and more commercially competent sales personnel.
3. Quote the minimal specification unless requested to the contrary.
4. Quote the minimum cost or price.
5. Don't ask too many questions unless it will benefit both the customer and us, especially when the consultant is conducting "a bidders meeting."
6. Don't provide more information than requested, because it may only find itself into the hands of the competition through the consultant who wants all the bidders to bid "apples for apples".

What is the suppliers' new responsibility? Is it keeping the customer up-to-date technically or simply supplying prices when requested? There is a clear indication that those customers who have technical evaluation capabilities and have indicated that they want vendor input attract those equipment manufacturers who have developed product innovation and are looking for customers to try out their new ideas.

What are the long-term consequences of this exclusive preoccupation with price instead of R.O.I.? Is it, "you get what you pay for"? Today, for many purchasers, R.O.I. really is R.O.P.E. – Return On Price of Equipment. They should be wary not to hang themselves with it!

Steve Sadler is president of Sadler Conveyor, based in Montreal, QC. He can be reached through Email at: editor@automationmag.com

Reply-To: <kcalder@kerrwil.com>
From: "Kate Calder" <kcalder@kerrwil.com>
To: "Steve Sadler" <sadler@sadler-conveyor.com>
Subject: letter re: your AUTOMATION article
Date: Thu, 6 Dec 2001 11:50:14 -0500
X-Mailer: Microsoft Outlook IMO, Build 9.0.2416 (9.0.2911.0)
Importance: High

Hi Steve,

My name is Kate Calder, I am the new Editor of Manufacturing AUTOMATION. Pasted below is a letter I received for your article in the Nov/Dec issue. Thought you would like to respond for next month's Reader Feedback section. Could you possibly send it back to me for tomorrow? The issue goes into production on Monday. It can be a very brief response. Thank you very much. I hope to keep in touch with you, perhaps you could write another column in the future?

Best regards,

Kate Calder
Editor, Manufacturing AUTOMATION
905-890-1846 ext.222
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To: Steve Sadler.

Dear Sir,

The article was brilliantly written and true. Although, one of the facts of why the seasoned engineers, within our customers engineering groups, are missing was missed. Outsourcing and flattened structures are the prime reasons, the skills required are not being taught at school or encouraged. The Engineering apprenticeship schemes in Europe and N.America almost stopped in 1981 and so the seasoned engineer is retiring and no one is trained to step into his or her shoes. The customers are sending the cost of the process planning and product design down hill. Unless we train our people we will not remain a supplier, regardless of cost. The customer also needs to have its engineering tech centers close to the manufacturing sites, not remotely situated. Again, well done on the article.

Mick Smythe
General Manager & C.O.O.
Rumble Automation Inc.

Inexperienced Customers !

Suppliers know more about equipment and its application than do their customers !

This provocative statement will not win over many new customers, yet amongst machinery and equipment builders a lot of heads will be nodding. It didn't used to be that way a decade ago and I hope it won't be that way in the future.

So, what exactly has happened from the equipment builders perspective? Why are our customers so inexperienced and what are the consequences of this new reality. Let's take a look at what it used to be like in the late 1980's

Overview

During the latter half of the 1980's most processing and manufacturing companies had in-house manufacturing and/or plant engineering and maintenance departments. They were a mixture of engineering school graduates and technical people with many years of experience. They had seen and done that before. They had their own standards and designs. They knew, by experience, what worked for them and what didn't in their facilities. They could and would discuss their requirements with their suppliers and together innovation was encouraged. They bought equipment that had the quality they needed. Justification to purchase one product over another was based on several factors. They bought "Best Value" and weren't adverse to sticking out their necks and recommending the higher priced equipment because they had the experience to justify the premium as "Best Value". Don't get me wrong, price was important but so were all the other factors of quality, dependability, suitability, engineering support, availability and etc.

To support this "everything matters" all-inclusive approach, on the part of the manufacturing customers, the equipment engineers and builders had a complimentary group of engineers – both of a sales and technical background. There was a general belief at that time, that it was the suppliers responsibility to keep the customer up to date technically so they gave seminars and spent considerable sums on product development, because they knew their customers wanted the most productive machines and were willing to pay for it.

Consequences – “the top and the bottom”

Now, the other side of the issue was the general economic slowdown of the late 1980's and early 1990's. Many companies flattened their structure to save dollars. This meant the downsizing or the complete elimination of the senior technical and supervisory levels of plant engineering – ultimately, all that was left was just, “the top” and “the bottom” !

Outsourcing based on Price

This was the beginning of outsourcing. Made sense to the top management and they sold it to the shareholders. Their thinking was why retain expensive middle level management, when you can outsource the :know-how” when you need it – just contact your local Consultant for a “rent-a-body”. On paper that approach looked good BUT the reality was unrealistic because there was no one left in their organization to select the “expertise” and the experience factor the customer required for those specialized areas. So, the selection of “the right consultant” was made on cost or fee charged and they in turn selected staff with general knowledge and at a cost that allowed them to be competitive – since price frequently was the primary factor in making a “Consultant selection”.

The assumption by the client customer that the consultant could do the same job as their ex-in-house engineering dept. was totally unrealistic. Consultants are generalists (to be polite) and know next to nothing about the equipment builder's product or their client's technical processes and "know-how". To be absolutely fair, how could they be expected to? So, when it came time to select the equipment manufacturer, the consultant used the same selection criteria by which they were selected – price!

Plant Engineering.

At the beginning of the slowdown, many of the “let-go” plant engineers became redeployed in the equipment manufacturers operations, but as the slowdown continued, the senior engineers joined the ranks of the early retired.

So the dynamics of the market place changed when it came to vendor or supplier selection. Whereas previously, there was a balance between the customers and vendor/suppliers, in terms of human and technical resources, to evaluate, first their own requirements and secondly, the recommendations made by the suppliers in their proposals. All that “know-how” was lost to the manufacturing sector – both to the customers and to a much lesser degree, the machinery builders

Imbalance between customers and suppliers

The equation was becoming unbalanced in that the equipment manufacturer had significantly more expertise in their specialty – than did their customers. So much so, that the customer was having difficulty in discussing and evaluating the equipment proposals from the traditional criteria of suitability, engineering design, production output, life cycle, maintenance cost and price.

So you have generalists as consultants, generalists as customers (managers and purchasing agents) and experts as equipment engineers/manufacturers.

Price is king

Consequently, the decision became more and more, one based on price. The old experienced mfg. Engineer was no longer in the picture and the decisions were becoming more and more based on price by consultants/administrators/purchasing/buyers personnel – not manufacturing or maintenance engineers. Low price is not difficult to justify – it speaks for itself – whereas “best value” is a mix of many factors – most based on past experience. The suppliers, have no one to discuss the technical aspects of the application /system so everything boils down to price and next to nothing on the technical aspects or maintenance cost or effective life of the equipment.

R.O.I. – Return On Investment

To claim that the effective life of your equipment is twice that of a competitor's falls on deaf ears. Everything is price - price - price and it's understandable because price speaks for itself - it doesn't have to be defended or justified as would a "best value" choice, which is, say 25% higher than the lowest price.

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Without the knowledge of, at least, the above 5 points, you cannot have a meaningful evaluation of R.O.I.

Many capital equipment budgets are totally isolated from maintenance or operations budget. So, what appears as a good capital (cheapest equipment price) investment, once the maintenance or operations (labour) expense is added, turns out, after a few years, to be a very poor investment. However, with the high turnover of managers, many are not around long enough to benefit or suffer from the results of a good or poor R.O.I. on plant or equipment

Supplier reaction

As more and more contracts were being awarded to the "Low Bidder", more and more it became apparent to the equipment manufacturers that they had to do 2 things to stay in business and prosper in the "new economy"

- 1.Reduce the engineering overhead in the equipment price by curtailing R & D in new equipment design and applications. Reduce number of design seminars and redirect design efforts to "Cost Reduction" at the cost of everything else.
- 2.Move away from using exclusively, professional engineering sales reps to less technical and more commercially competent sales personnel.
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Supplier Obligation in the future

What is suppliers new responsibility?

Keeping the customer up to date technically or just supply prices when requested?

There is a clear indication that those customers who have technical evaluation capabilities and have indicated that they want vendor input, attract those equipment manufacturer's who have developed product innovation and are looking for customers to try out their new ideas which will give both parties an advantage over their competitors in the long term.

Conclusion

What are the long term consequences of this exclusive preoccupation with price instead of R.O.I. ? Is it, "you get what you pay for"?

Today, for many purchasers, R.O.I. really is R.O.P.E. – Return On Price of Equipment -- they should be wary not to hang themselves with it!

Date: Thu, 6 Dec 2001 12:36:59 -0500

Hi Steve,

More praise from your readers! Here's another one that you could comment on if you wish.

Best,

Kate

This now brings me to a very good article by Steve Sadler titled "Wanted: Skilled Customers" in the current issue. Kudos to Steve for bringing this out and that too quite critically from all (manufacturer, consultant and purchaser) points of view. I agree with him that the situation is now more close to ROPE than ROI. Also I would be tempted to define ROPE as "Return on Price of Efforts" for both purchaser and manufacturer. The returns are more to the manufacturer for hiding information and returns are less to the end user for not having asked information. Price evaluation is fast replacing meaningful technical evaluation. This I cannot say for Canada as I have moved recently but in other parts of the world this situation does exist and is more prominent in periods of economic slowdowns. Situation is that information is coming from manufacturer on a need to inform basis. You also run into supplier representatives who do not have in-depth knowledge to answer questions leave alone educate the end users who then could do justice in their evaluations. The consultants on their part must try and force the end user to buy the best based on ROI instead of the price. All in all a very good article and food for thought to all the affected parties manufacturers, consultants and purchaser.

I hope to see similar good and thought provoking articles in your magazine.

Once again good luck and best wishes to both you and Kate.

Yours truly,
Alok Varshney