A STRATEGIC PERSPECTIVE ON VALUE

USING A TOTAL VALUE ASSESSMENT TO MORE ACCURATELY QUANTIFY LONG-TERM BUSINESS BENEFITS
In manufacturing, it is definitely not just the thought that counts. For machine builders, end users and system integrators in literally every industry, it’s the results that count. Companies that meet their goals -- increased productivity, reduced costs, delivering new innovation, improving quality, responding faster to customer needs -- achieve real results that translate into tangible business benefits.

We’ve all been on the receiving end of sales pitches that put emphasis on the concept of “value” to us, the customer. In fact, if you think about it, all but the absolute lowest priced supplier need to use value as part of their approach. Although we know that value is important, few can succinctly define it and fewer still can quantify it. As a result, the term has become a word with little real meaning.

That needs to change. Delivering value is absolutely critical to the success of any organization, and having the concept disintegrate into the trash bin of meaningless business buzzwords would be detrimental for customers and suppliers alike. That said, there needs to be a more disciplined approach to defining and determining value so that buyers can make intelligent business decisions.

This requires a two-way commitment. For certain, suppliers – whether they supply products or services – need to be able to articulate the real value in what they offer. But in addition to that, buyers need to help – by acknowledging what offerings will truly be of value to them.

This paper from Rockwell Automation will explore the various ways of quantifying value today, identify a set of clear steps for calculating value, and introduce a new business process called the Total Value Assessment (TVA). With this paper as a guide, readers will be able to more succinctly and strategically bring the concept of value into long-term purchase decisions.

According to Anderson and Narus1, “value in business markets is the worth, in monetary terms, of the technical, economic, service and social benefits a customer receives in exchange for the price it pays for a market offering.” They also explain the importance of identifying and measuring the “packets of value” in order to view the entire “value package.” In other words, it is important to take note of how each phase in the ownership of a product or service – whether it is up-front purchase, improvement or ultimate disposal -- is driving results and contributing to the total value picture.

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In today’s business environments, it is important not to confuse expectations with value. It is not enough for a supplier to list product features and benefits, and claim that his technology makes him a “value-add” supplier. Nor is it enough for the supplier to sell performance as a value-add benefit because performance is a baseline expectation. The supplier who truly proves his value is the one who goes beyond the features and benefits, and can clearly quantify the value and its impact on the buyer’s business. Conversely, it is absolutely critical for the buyer to recognize and acknowledge what is of value to the business. It could be any number of things that, over time, produce results beyond initial cost savings.

**Short and Long-term Value**

One of the most challenging decisions when making a major investment is choosing between up-front price versus long-term cost. Price-conscious buyers tend to focus heavily on the lowest possible up-front purchase price without significant concern for long-term value. This isn’t always a bad idea, but it does neglect to consider benefits like increasing productivity, efficiency, reliability, safety, training, long-term maintenance costs or other issues critical to a manufacturing operation.

For example, consider a mid-market OEM exploring the idea of converting its mechanical system or standard motor/drive controller to a servo-controlled system to keep up with industry competition. If a supplier begins discussing the technical features of servo drives and motors, the OEM might be intrigued, but will ultimately balk at the cost of a servo system – which is generally two-to-four times greater than a mechanical system. However, if the supplier can explain the value added benefits the OEM will realize by using servo control – such as improving throughput and machine reliability, reducing the number of extraneous components, and opening the door to new customer markets – the investment becomes an easier commitment to make.

Purchasing the lowest-priced solution in the short term can hide long-term costs associated with maintenance and system upgrades, which some experts contend make up the bulk of the total cost of ownership of most capital equipment purchases.

When a buyer selects a product based on price alone, it is usually because he or she did not perceive a substantial difference between products from competitive suppliers. In this instance, the customer sees the supplier as a commodity or a “parts-only” supplier. It’s incumbent on the supplier to demonstrate and communicate its unique value to distinguish itself in the market and earn the higher price that it’s asking for.
Following is a partial list of attributes that contribute to long-term value of a single machine or project:

- Performance
- Efficiency
- Lean initiatives
- Life cycle costs
- Flexibility and scalability
- Information and diagnostics
- Safety features
- Industry standards
- Contribution to improvement of related processes

Additionally, higher-level business and global attributes must be taken into consideration, including:

- Risk
- End customer effectiveness
- Market requirements and share
- Standards adherence
- Manufacturability and production requirements
- Scalability

Long-term value has little to do with the cost of the equipment, and everything to do with the way the purchase allows the customer to modify business practices and processes for overall efficiency. For instance, take the purchase of an ERP system. It's almost impossible to evaluate the implementation based solely on its purchase and implementation costs. Where the real value comes is in the way that the new system allows the company to change its business processes – in manufacturing, marketing, sales, human resources and other critical business functions.

**Barriers to Making Value-Based Decisions**

Intellectually, it’s easy to embrace the idea of long-term value, but two factors generally make it difficult for suppliers and customers to talk about it. First, doing the homework to define and illustrate what specific value-add components will be meaningful to each customer is labor-intensive and takes time away from other customer engagements. Ironically, it is this intimate customer interaction that most sales people crave in an era of “solutions selling.” Second, discussing long-term value can require moving beyond the realm of “black and white” specifications — whether they be technical, monetary or time-based. This is not necessarily within the comfort zones of engineering-oriented sellers, and requires input and perspective from the entire buying group.
According to Louis De Rose, of The Value Network\(^2\), value is not achieved through a linear approach, but is accomplished concurrently and continuously through processes that are integrated by an objective or strategy. In other words, the supplier and buyer need to establish a holistic view or understanding of the impact that purchasing decisions will have on the business and operations, not just a single point of reference. This requires a comprehensive understanding of business processes and end products. This leads us to the concept of Total Value. Rockwell Automation sees Total Value as the delivery of business value both short- and long-term, as well as across monetary, utility and importance dimensions.

Before we explore the concept of Total Value in more detail, it’s important to look at today’s generally accepted value equations and identify where they often fall short.

**Quantifying Value**

Traditionally, lengthy and complex spreadsheets have been used by suppliers and buyers to quantify value and ultimately justify the purchase decision. One of the most common cost analysis methods is Return on Investment (ROI) or Return on Assets (ROA).

ROI is a tool that suppliers often use with buyers to analyze costs and valuate potential returns. Generally, ROI and ROA are based on comparing the cost of a purchase with the value of potential returns -- expected sales, resource allocations, increased capacity/throughput, etc. On the surface they make sense – after all, getting $5 back on a $1 investment is good business. However, while ROI calculations appear to be objective and accurate, the methodology is questionable on a number of levels.

First, it is difficult to determine where the “return” comes from. In a complex purchase – such as an automation system – it is important to know which aspect of the purchase contributed most to the ultimate result – the technical capability of the equipment, the expertise of the integrator, the careful planning of the end user, or the overall design of the OEM’s machine.

In addition, using ROI to justify major purchases is, in many cases, a flawed premise because the “return” may not be monetary, but instead utilitarian. You don’t necessarily think about how much money you’re making or saving every time you drive your automobile. In fact, monetary gain may never have entered your mind. Instead, you likely purchased the car based on your need to get from Point A to Point B in the most effective way possible. In addition, you might actually care about the statement you make while driving it, as is the case with many purchasers of alternative energy vehicles. For this reason, ROI calculations, while appropriate in some instances, are limited in their usefulness on a broader scale.

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\(^2\)The Value Network; Integrating the Five Critical Processes that Create Customer Satisfaction; 1994; Ch 1
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Another cost analysis program is Total Cost of Development (TCD) or Total Cost of Ownership (TCO). Many capital equipment OEMs have found this methodology to be the most compelling because it helps them and their end user customers focus on reducing costs while comparing the features and benefits of similar products or equipment. The TCD equation also provides a framework for identifying costs during the product or project lifecycle. These costs may include product throughput, warranty, scrap and maintenance.

Both of these processes can offer useful comparisons, but are limited because they only demonstrate the cost and return on a single purchase or an isolated project. What businesses need is a method that goes beyond the traditional before-and-after comparison to show a holistic picture and assesses the total value earned across multiple facets of the business. This is where the Total Value approach makes the most sense.

A Total Value approach considers all aspects of the decision – cost, utility and importance – and helps suppliers and purchasers understand if the project and overall engagement was a good business decision. Using a Total Value approach helps demonstrate, quantify and validate that the partnership and solution was a good business decision that drove value to all levels of the organization. While this partnership isn’t a formal business partnership in a legal sense, it’s just as important.

**Impact of Legacy Value Calculations on Supplier-buyer Relationships**

The connection between the supplier/buyer partnership model and the valuation model is often misunderstood. In general, Rockwell Automation has found that the more advanced the partnership, the more robust and accurate the valuation methods.

A graphic model of a partnership continuum is pictured on the next page showing four major levels of partnership – Component Supplier, Strategic Sourcing, TCO/TCD and Total Value.
This graph illustrates the continuum of value for a strategic partnership — as a strategic partnership grows, so does its value. As the value partnership rises into the Total Value Assessment (TVA) program, it moves the relationship from being a parts supplier into a business partnership. The key to TVA is to not only reduce the customer’s machine costs, but also to examine and improve the customer’s overall business.

The first two levels - Component Supplier and Strategic Sourcing – are the most common types of buyer-supplier relationships. In a Component Supplier partnership, sales decisions are based solely on price and engagements occur on an order-by-order basis among multiple suppliers. This type of partnership is often perceived as requiring the least amount of time and is the best method for cutting costs. In some circumstances, especially commodity products, it makes sense to buy from the lowest-cost supplier regardless of location, reputation or longevity. For this reason, most Component Supplier engagements rely on traditional ROI/ROA calculations for value assessment – an old methodology that should be retired.

However, buyers and suppliers need to be cautious because this Component Supplier relationship can often lead to hidden inefficiencies that reduce Total Value. Buyers rarely consider the time spent on seeking out a new supplier and the requisite negotiations needed for each engagement. Also, the costs saved on the initial sale can be spent later if the product requires additional time and money in terms of engineering, maintenance, training, disposal, service, installation and downtime. In addition, a supplier with little ongoing interaction with the buyer is less likely to offer advice and expertise that results in overall process improvements. As a result, what appears to be the “cheapest” model on a spreadsheet can actually offer the least amount of long-term value.
The second partnership model, Strategic Sourcing, also traditionally uses the ROI/ROA model for valuation. In a Strategic Sourcing arrangement, the buyer works with a single supplier to create a “common parts” program in which a catalog of products are purchased for a discounted bulk price over a contracted period of time, usually resulting in lower revenue for the supplier. Additionally, it is common for these programs to include predetermined quantities that the buyer agrees to purchase each year. Sometimes, this partnership can minimize risk and cost for the buyer because the supplier must offer products with a competitive price, lower overall implementation risks, and some key value drivers such as quality, reliability or service. Taking this into consideration, a strategic sourcing program offers a higher level of value to the customer than the component supplier program.

On the other hand, a Strategic Sourcing agreement can sometimes result in negative long-term impacts to the overall business operation. For example, engineering teams can be required to design equipment using the selected technology regardless of current design diagrams, end user specifications, standards requirements, functionality or compatibility – all of which could offset any cost strategy gains earned. Secondly, Strategic Sourcing programs generally lead to creating higher inventories and more scrap than other programs due to quantity requirement purchasing practices. Additionally, a Strategic Sourcing partnership can create inconsistency due to continually having to adapt and integrate different technologies, thus consuming a lot of development time.

The third model is the Total Cost of Ownership (TCO) or Total Cost of Deployment (TCD) partnership. It is the first step toward a holistic, value-add relationship. This model includes streamlining management among cross-functional teams, standardizing on designs and technologies, and focusing on core competencies. In this kind of partnership, an assessment is conducted before beginning any project to provide an understanding of all costs associated with a product or project, and to help validate the project.

A high level of involvement and commitment is required from both sides. For a customer, choosing a TCD partner requires evaluating price, as well as technology performance, product delivery, field support and continuous innovation for the products delivered. The supplier must provide the best possible price and product to meet the customer’s needs as well as provide the

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3Many people will interchange the meaning of Commonality and Standardization. Although they share some characteristics, commonality is defined as when a manufacturer buys common parts from a single supplier and applies them to a technology or product. Standardization is defined as when a manufacturer buys common parts from a single supplier and applies these common parts along with best practices, and design and process methodologies to a technology or product, across all levels of the organization.
best overall solution/service that improves their customer’s bottom-line. However, discussions on TCD or TCO are designed to focus on a specific project, product or activity and delivers meaning only to the person or specific group who performed the analysis. A discussion on true value requires collaboration among all departments of the business.

**Introducing Total Value and the Total Value Assessment**

Absent from these first three partnership types is a discussion of true value that considers long-term results to the overall business and the impact that it will have on a company’s bottom line. Today, a different kind of alliance is needed – one that evaluates how each incremental program and purchase contributes to the total value package. Rockwell Automation calls this the Total Value partnership model.

In a Total Value relationship, the buyer and supplier work together to assess, measure and validate the actual value earned and revenue realized from a supplier-customer relationship. Specifically, the Total Value model paints a true picture for the executive management team of what revenues are and what has been gained by their business decision to work with that particular supplier.

A key component of the Total Value partnership is alignment that creates the best synergy between the buyer and supplier, and the greatest yield throughout the business. Just because a supplier “can” perform a specific function doesn’t mean that a supplier “should” perform that function. Typically, the manufacturer should focus on designing, developing and delivering the best machine, while the supplier should focus on determining and providing the best-suited solution(s) for the application.

Another component of a Total Value partnership is standardization of business operational processes. This includes working together to drive greater efficiencies in existing processes, such as inventory/asset management, field support management, production or assembly, and commercial marketing strategies.

A Total Value partnership model is one that reflects a true alliance between the buyer and supplier because each side must work together to meet the same objectives, which are ultimately improved time-to-market, increased quality, better throughput, lower Total Cost to Design, Develop and Deliver™, and ability to differentiate in the marketplace. Rather than focus purely on costs, buyers and suppliers must consider the importance of time-to-market as a primary factor driving success. When there are competing products or machines in like industries, the sooner the machine is delivered, the sooner the customers – both OEM and end user – are earning revenue. Additionally, the supplier sells more to the manufacturer to help meet its new demands. Provided the technology is implemented properly, improving time-to-market is a win-win situation.
In order for the buyer to understand the true value a supplier can add, they must be able to actually see an impact on their bottom line, whether it be through increased revenues, reduced expenditures, improved internal processes or value-add services. In other words, a Total Value partnership is one in which the supplier and buyer work cohesively to convert perceived or projected value into actual, realized value or benefit.

Additional characteristics of a Total Value partnership include:

- Applying best practices in design, development and delivery
- Global partnership
- Standardization methodologies
- Global service and support
- Business/supply chain partnership

The bottom line is that TVA measures the effectiveness of a supplier-customer relationship by converting perceived or projected value into actual value and real benefits. It is an ongoing work-in-progress, and the five key takeaways for the supplier and buyer during a Total Value Assessment are:

- The ability to identify, agree on and understand the needs of the business
- New ways in which the two sides can work together to reduce the total cost of deployment
- An understanding of the customer’s business operations and how the supplier can help lower its operating costs
- A solution that helps the customer increase its sales revenues, or avenues to other desired markets that might not have been realized previously
- Increased effectiveness of each customer’s business

Suppliers today must develop relationships and reputations that differentiate themselves on more than just products. A supplier’s track record is earned in part based on additional services and solutions that lower buyer costs and deliver bottom-line results. Furthermore, the Total Value supplier is capable of creating less tangible – but just as important – benefits that breed true customer loyalty.

First, Total Value suppliers serve their customers efficiently. They resist the temptation of trying to “be-all” and “do-all” because, in reality, they simply cannot. Instead, they identify real needs only when they exist and address them with appropriate solutions. This requires them to do some homework so they can learn and truly understand their customers’ needs. Then, they identify issues that fall within their realm of competence so they can implement a solution and provide the desirable results.

Second, Total Value suppliers streamline business operations. They collaborate with their customers to identify areas throughout the organization where they can implement new solutions or execute a value-add service that will improve
performance and efficiency. Examples of such strategies could be asset management, parts management and critical stocking programs. This allows the customer to focus on their core competency – manufacturing products or building machines.

Third, and perhaps most difficult, a Total Value supplier helps its customers win new business. Ultimately, solutions and services should help customers improve their product development cycle and reduce their Total Cost to Design, Develop and Deliver and time-to-market, bringing greater value to the end product, attracting prospects and improving the effectiveness of the end customer. For example, helping customers with a standardization program can help them become more flexible and responsive to market changes and improve manufacturing efficiency. These efforts will reduce their total cost of deployment, while helping to expand the customer base and position the supplier as a leader in their market.

It should be clear that the Total Value partnership model offers the highest level of real value to both buyer and supplier. However, as the old adage goes, “a picture is worth a thousand words.” For that reason, Rockwell Automation has developed a proprietary assessment tool that offers a more inclusive and comprehensive analysis.

The Total Value Assessment (TVA) measures the total impact that a product or project can have on a business by accounting for all potential cost, risk, efficiency gains and implementation effectiveness. The analysis helps assign value to things that would otherwise be considered intangible (for example, the quantitative value realized by managing and lessening risk).

The TVA uses several input parameters and generates reams of useful data, yet it is concise enough to bring the big picture to the forefront, clearly illustrating business value. It is designed to be conducted collaboratively with input from key stakeholders such as operations, sales and senior management. Data extracted from the company includes general customer information (current company revenues, number of machines shipped per year, etc.), information about labor and assembly practices (design, development and assembly rates, average times, etc.), and overall effectiveness (efficiencies earned from new solutions, standardization, best practices, etc.).
Some specific questions may include:

- What is the reduction in parts as a result of parts consolidation or standardization?
- What is the reduction of late releases to purchasing/manufacturing from engineering?
- What is the reduction in assembly from optimized designs and hardware integration?

After engaging in the TVA, Rockwell Automation provides the last crucial piece – a detailed analysis of the results called the TVA Scorecard. This summary clearly illustrates the performance, efficiencies and revenue gained across the business and is broken down into the following categories:

- **R&D** - including subcategories, such as gains from design methodologies or identifying supply chain issues early during the design phase
- **Engineering** - including subcategories, such as gains from engineering being able to better meet program/project timelines through lower total cost to design, develop and deliver a machine, or elimination of duplicity in designs
- **Production** - including subcategories, such as gains from inventory reductions or ability for production to meet shipment timelines
- **Maintenance, Repair and Service** - subcategories, such as gains from reducing service turnaround time or the time a machine spends idle on the shop floor
- **Risk Management** - subcategories, such as gains from ability for machine to meet scheduled release date or time to locate critical information
- **Time-to-Market** - shows the potential reduction in time-to-market

It is important to note that the scorecard does not outline projected values. It includes real data and real analyses. For Rockwell Automation, the TVA Scorecard serves as a report card of the company’s ability to deliver actual results and value as promised to the customer. It is a means to justify the risk a manufacturer has taken in their supplier partnership. If the TVA concludes that the customer has seen no improvement in one of the areas listed above, the supplier can conclude that they have fallen short of customer expectations (although there can be some acceptable reasons). On the other hand, a low score may also be seen as an opportunity for future or continued engagements to expand in other areas with the customer.

As with any initiative, the proof is in the results. The following images represent the average findings from TVA for a number of manufacturers after changing their purchasing model from price-focused buying to partnering with Rockwell Automation and implementing solutions-focused decisions.
After engaging the manufacturers in all aspects of a Total Value partnership, each was asked about the impact their supplier had on their business for improvements in operations, engineering, costs, risk management and time-to-market. Revenues earned were calculated for each of the categories, giving the customer a sum of the total value derived from this relationship.

As seen in Figure 2, the overall results show a significant increase in efficiencies throughout the business. For example, the average reduction in engineering turnaround time for all manufacturers in this segment is approximately 18 percent. This reduction also equates to revenues earned by the manufacturer and varies by company due to labor and times. In the case of one manufacturer, an 18 percent improvement in this segment meant an increase in value or recognized revenues earned of $250,000.

It’s important to note that, as part of a Total Value partnership, some manufacturers did take risks, make investments and incur significant initial costs surrounding the implementation of standardization programs, but the final calculations consider these costs. Yet, the forward-thinking nature of the relationship prevailed in helping them achieve greater revenues in the long-term.

Figure 2

Value-add from Rockwell Automation TVA Partnership

Results are comprised from an average among numerous manufacturers.
Figure 3 shows that by working with a Total Value supplier, manufacturers have the potential to reduce their time-to-market by two weeks or approximately 20 percent. Similar results for each are shown for manufacturers with revenues greater than $50 million.

According to studies conducted by the Thomas A. Read Center for Distribution Research and Education at Texas A&M University, 74 percent of manufacturers are more willing to work with a supplier or distributor who can provide documented value as opposed to a supplier who sells on price alone.

In the end, results are what matter – real results that translate into tangible business value. With a solid commitment from its customers, Rockwell Automation is able to determine what is valuable to a particular company and use data from within the business to articulate real value. Rockwell Automation strives to use the Total Value partnership model as the foundation for all of its customer interactions – working to provide each customer the right balance of products, expertise and global aftermarket support. With the concepts in this paper as a guide, Rockwell Automation is able to help manufacturers and machine builders quantify value and use it to make the most strategic business decisions.
The Fundamentals of Value

In order to understand what features and benefits a buyer might consider of value, it might be helpful to take a step back and revisit some of the basic principles of economics. Traditionally, buyers and sellers have focused on a single dimension of value – the monetary value. That’s not surprising, as it is the most common and quantifiable measure of value. However, the figure below shows that there are at least two other value dimensions that need to be considered.

What is sometimes forgotten is that value extends beyond monetary value, and should include two other important characteristics – Utility and Importance.

Utility is the usefulness of the purchase – whether a product or service accomplished the job for which it was purchased. For instance, think about your last automobile purchase. If you’re like most people, you certainly looked at the monetary value – how much it cost to purchase, maintain and fuel the vehicle. You probably looked at the resale or disposal value as well. But it’s not likely that you stopped there. You also looked at its utility.

From a utility standpoint, the automobile needs to meet your driving needs. If you live in a climate with harsh winters, you need to consider whether the automobile will get you from place to place in heavy snow. If you live in a highly populated area, you consider whether it is small enough to get into tight parking spaces. If you have children, you need to take account of important safety features. All of these factors are undeniably important to the value of your purchase, but have little to do with the monetary aspect.

Then there is Importance – the most difficult aspect to define, but in some cases the aspect that overrides the others or at least breaks any deadlocks. Importance
has to do with the statement you make by executing the purchase. That automobile you purchased may have been at the right price and meet all of your needs from a utility perspective, but you will not be satisfied with your purchase if you don’t feel good about driving it. For some, feeling good is “peace of mind.” For others, it is “appearance.” For others still, it is asking whether or not a spouse will approve.

It is all three of these aspects – Monetary, Utility and Importance – that ultimately make up the value of your long-term purchase.

Let’s look at another real-life, personal scenario to understand this kind of cost-benefit analysis. Take the case of two refrigerators, each equipped with a water filtration system. Brand A costs $900 and has a $50 filter requiring replacement every six months. Brand B costs $1,200 and has a $100 filter requiring replacement every two years. A price buyer will choose Brand A in nearly every instance. However, over the 10-year life cycle of the refrigerator, assuming both systems are equally reliable, the total cost of ownership of Brand B is clearly lower than Brand A.

At this point, it’s natural to argue the fact that purchasing an automobile is different than purchasing capital equipment or services in a business environment. But is it really all that different?

From an end user perspective, purchasing the cheapest packaging machine, digester, conveyor or control system is a huge mistake if it doesn’t meet or exceed performance specifications (aka Utility). The purchase price is a small piece of the cost puzzle. Re-engineering a standard machine so that it integrates with existing plant floor equipment can cost end users significant time and money. The end user that has clear machine control specifications will save money by getting a solution that fits the first time.

From an OEM perspective, there are times when it is “Important” to assure the end user that the machine you are supplying will integrate easily into their existing facilities. As a result, you may choose a control system that matches the end user’s installed base rather than one that has the lowest initial purchase price. Certainly, utility and monetary value cannot be overlooked, but those OEMs who prefer to compete on value vs. purchase price often do so by offering better-than-average components and controllers, and more robust engineering and technical support.

From a systems integrator perspective, you might find that the customer wants assurance that you have a strong track record of success in the industry you’re operating in. In this instance, the value may be monetary (economies of scale associated with multiple installations), utilitarian (you know how to install systems that work properly) and importance (peace of mind that you are not “making it up as you go along” and that you are applying your experience to offer a better solution).
In reality, most purchasers – whether they be consumers or businesses – find that it’s not an “either/or” proposition, but a blend of all three points of the value triangle. For some, the primary emphasis might be on monetary value because Utility is a given and Importance isn’t particularly significant. For others, the difference in monetary value between two options may be negligible compared to their performance and/or the importance of purchasing from a known supplier with a strong reputation. This is why it is so important for the purchaser – and not just the supplier – to define value in terms of their own unique needs.

In reality, the highest degree of value in an automation setting comes when the end user, machine builder and controls supplier all work together to define value. When this is done, the final installed system will take into account monetary, utility and importance benefits – ultimately leading to true long-term business value.

Following is a chart showing potential value metrics under Monetary, Utility and Importance points of the Total Value triangle.

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<tr>
<th>MONETARY</th>
<th>UTILITY</th>
<th>IMPORTANCE</th>
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<tbody>
<tr>
<td>• Return on investment</td>
<td>• Throughput</td>
<td>• Increases customer preference</td>
</tr>
<tr>
<td>• Return on assets</td>
<td>• Quality improvements</td>
<td>• Shows differentiation</td>
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<tr>
<td>• Purchase price</td>
<td>• Safety</td>
<td>• Demonstrates industry leadership</td>
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<tr>
<td>• Maintenance costs</td>
<td>• Time to market</td>
<td>• Helps justify premium pricing</td>
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<td>• Upgrade costs</td>
<td>• Deadlines</td>
<td>• Adherence to industry standards</td>
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<tr>
<td>• Training costs</td>
<td>• Performance</td>
<td>• Environmental responsibility, sustainability</td>
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<td>• Licensing</td>
<td>• Productivity</td>
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<td>• Royalties</td>
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