The eBusiness and Economic Benefits of Data Synchronization

How IDEA Exchange and IDEA Connector enable better marketing, sales, cost to serve, customer satisfaction and more — beyond lowering cost of operations

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EXECUTIVE SUMMARY

This paper discusses a research project to investigate how manufacturers and distributors have benefitted over time from using the IDEA Connector – an electronic Master Data Management (MDM) platform – and the IDEA Exchange – an electronic data interchange (EDI) for exchanging eBusiness documents – enable trading partners across the electrical industry such as manufacturers and distributors to improve supply chains by lowering costs, reducing errors and providing accurate, up-to-date product information.

The primary motivation for implementing services such as IDEA Connector and IDEA Exchange was initially to improve operational efficiencies and increase the quality of service for transactions among trading partners and with end customers. The analysis showed that the IDEA Connector is the least costly and least error-prone method for sharing essential product data and that companies that moved ordering systems to IDEA Connector were able to lower costs by as much as 80 percent.

Because the IDEA Connector dramatically lowers ordering costs, the cost savings fall to the bottom line and directly increase profits. With manufacturers and distributors operating on razor-thin margins, strategic changes that reduce costs can have significant impacts on profitability. Survey data indicates that switching to the IDEA Connector can increase profits for a representative manufacturer by 20 percent, and by 37 percent for a representative distributor, just from cost savings in operations.

The economic value analysis model found that the availability of accurate, up-to-date product information can grow revenues and profits at a multiple of the investment required to implement the IDEA Connector and IDEA Exchange solutions. Even for smaller manufacturers and distributors, bottom-line financial benefits range from five times to over 10 times the investment. Further, the benefits may be even greater for larger organizations. The economic value model (EVM) will be described in this paper, in addition to estimates of financial costs and benefits for typical manufacturers and distributors who implement the solutions.

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When the IDEA Connector was first made available, lack of data synchronization between manufacturers and distributors was known to be overly costly for many reasons: multiple sources and formats of product data; costly errors from incorrect product and pricing information; lack of automation; long lead times to provide current up-to-date information about products; and other data-related issues. The Industry Data Exchange Association (IDEA) was created to manage the development of processes and systems to foster the growth of eBusiness throughout the electrical industry.

The IDEA Connector contains electrical manufacturer product, pricing, and packaging information. Current electrical manufacturer subscribers include the major players in the electrical industry, representing 85 percent of industry SKUs. The goals of the IDEA Connector are to promote data synchronization and to lower supply chain costs by developing a continually updated database that all manufacturers and distributors can use when sending or receiving a purchase order. Member companies can submit all their product, pricing, and packaging information to the IDEA Connector instead of maintaining, updating and shipping their product catalogs in multiple formats. Based on the analysis and operating performance of companies at the time, a representative manufacturer can generate an additional 20 percent profit margin equal to approximately \$97,000 in profit for every \$10 million in purchase order sales by posting data to the IDEA Connector. A representative distributor can generate an additional 38 percent profit margin equal to approximately \$73,000 in profit for every \$10 million in sales by downloading data from the IDEA Connector.

This research is based on direct interviews of a representative subset of manufacturers and distributors, along with selected stakeholders. The assumptions include common economic and growth changes across the industry. During this project we developed an economic value analysis (EVA) which models how the IDEA Connector and IDEA Exchange can financially benefit manufacturers and distributors in terms of operational improvements and cost savings in addition to

improvements in sales, marketing and customer loyalty and satisfaction. In this paper, we analyze how the industry is changing structurally and how the technologies can be used to evolve the business, and we discuss some near term expectations and future opportunities for the technology and its expanding capabilities.

OVERVIEW OF IDEA CONNECTOR AND IDEA EXCHANGE

The IDEA Connector is an application that allows manufacturers to securely share accurate and timely product and pricing data with distributors and other wholesale trading partners from one centralized location and in one standardized electronic format. In essence: publish once, serve many. Currently, IDEA Connector has data for more than 2.5 million SKUs representing over 2,000 manufacturer brands. For distributors, IDEA Connector serves over 8,000 locations and is used by 18 of the top 20 distributors on Electrical Wholesaling's "Top 200" list. In total, the IDEA Connector gives manufacturers access to a market for contractor business worth over \$80 billion.

The IDEA Connector provides trading partners flexibility while maintaining ownership and control over their data.

The IDEA Connector empowers and strengthens the competitiveness of manufacturers and distributors in the following ways:

Drives data quality and integrity throughout the organization and the supply chain

As a solid foundation for business processes and customer transactions, the IDEA Connector provides business trading partners flexibility while maintaining ownership and control of their data, which is the company's intellectual property. This enables manufacturers to control what information about their products, including specifications, pricing and packaging, end customers and distribution partners can access. It also ensures that the data is the intended information approved by the manufacturer.

Differentiates products from competitors

IDEA Connector offers users over 350 standardized fields, which allows suppliers to differentiate their products. In addition to core product data that allows suppliers to provide product specifications and parameters, and pricing and packaging attributes, additional data fields may be used to empower marketing and other functions that are especially useful in the evolving eBusiness environment.

The robust marketing content that suppliers can enter into the IDEA Connector to help their products stand out (from images and technical drawings to warranty information, MSDS sheets, and more) gives manufacturers more exposure throughout the supply chain, all the way to the end user. The result is unprecedented brand and product promotion.

Speeds up the sales cycle

IDEA Connector makes product lifecycle management effortless. Once loaded into the IDEA Connector, new items will be on authorized distributors' websites within 24 hours. According to one electrical distributor using IDEA Connector, "Without the IDEA Connector, we'd need three-to-four times more staff internally, and even with that extra manpower, the quality of the product data would still not be as good as what we receive from the IDEA Connector today."

Achieves significant cost savings from reduced ordering errors, returns and related operational expenses

The IDEA Connector directly reduces fixed costs associated with product data and the sales process by providing a more cost-efficient way to upload and download accurate, complete and upto-date product and pricing data. Correct pricing data eliminates misquoted bids and lost sales. Accurate packaging data reduces extra warehouse expenses. Robust marketing data makes it easier to fulfill customers' needs. High-quality data allows distributors to speed up the sales cycle while they reduce order errors, returns, and related operational expenses while realizing an average savings per order of 80 percent.

Strengthens relationships with trading partners

A core of 43 critical fields which contain transactional, marketing, and packaging information was identified as the most crucial information for distributors to conduct business and sell the manufacturers' products. In addition to core transactional product, pricing and packaging data, manufacturers provide marketing content to help distributors sell more products by including specification documents, images, attributes, videos and more.

The IDEA Connector can facilitate better overall information-sharing for strategic purposes that span the entire marketing, sales, fulfillment and customer service lifecycle using the information available from the manufacturer and content created in conjunction with distribution partners.

How IDEA Exchange Works in the Supply Chain

In addition to the business benefits of sharing and synchronizing data through the IDEA Connector, a key benefit of using IDEA Exchange services to reduce costs and increase efficiencies in the customer lifecycle is the automation of the quote-to-cash cycle using electronic data interchange (EDI). As a result, customers get their orders on time, and suppliers get paid faster. The IDEA Exchange enables suppliers to exchange eBusiness documents with their trading partners faster, more easily and more securely than with traditional Value-Added Networks (VANs) or paper-based methods. Purchase orders, invoices, special price authorizations and hundreds of other business communications can all be sent securely and cost-effectively over the Internet, even with companies that aren't EDI capable.

RESEARCH UPDATE

Over the past 15 years, the adoption of IDEA Connector and IDEA Exchange has increased substantially with over 2,000 manufacturers' brands represented. Those, in turn, are served by over 8,000 distributor locations. From the research conducted in the project, including interviews and industry analysis, we are seeing multiple substantive changes in the supply chain where data synchronization, sharing and electronic communication are having significant impacts on the businesses. One of the most effective ways to assess the impacts of these changes together with the benefits of using technologies such as IDEA Connector and IDEA Exchange is to develop analytic

models that allow measurements of expected results based on assumptions about the business.

The economic value analysis (EVA) conducted in this project is embedded in a spreadsheet-based model and used to calculate how the IDEA Connector and IDEA Exchange technologies lower costs while also improving revenue and profitability. The model uses the following types of information and assumptions to quantify the costs and efficiencies of the customer organization before and after implementing the IDEA Connector and IDEA Exchange technologies:

- Creating and maintaining product-catalog information
- Fixed and variable costs of order-processing infrastructure
- Variable costs of order processing
- Automation and integration

The IDEA Connector can facilitate better information sharing for strategic purposes, which span the marketing, sales, fulfillment and customer service lifecycle. • Costs attributable to errors and error handling

While the earlier customers of IDEA Exchange and IDEA Connector focused on operational improvements and cost

savings, more recent customers are focused on measurable benefits which affect revenue, profits and growth, such as:

Customer satisfaction and loyalty. Experience increased frequency and size of purchases from existing customers, turning one-and-done customers into frequent buyers, reducing customer defections to competitors and canceled orders when customer service levels fall below expectations.

Productivity benefits including personnel cost savings. Achieve more results while limiting, reducing or re-allocating resources to more profitable activities. Focus on high-priority activities that directly result in attracting more customers, increasing revenue from customers by attracting more orders and selling more products, and serving customers more profitably.

Marketing effectiveness. Experience improvements in marketing, sales and customer support that can be attributed to the IDEA Connector and IDEA Exchange solutions.

The EVM model calculates each of these gains internally based on assumptions that are specified by the model user and summarizes the overall benefits as Marketing Lift, i.e. the incremental increases in sales and profits that can reasonably be attributed to using IDEA Exchange and IDEA Connector in either a manufacturer or distributor. For examples of this analysis, please refer to the EVM summary section below.

MARKET TRENDS ANALYSIS

Today's electrical manufacturing and distribution market is vastly different than it was 20 years ago. Among the key differences between the early adoption of technologies such as IDEA Connector and IDEA Exchange and today's environment are the pressures from growth, change, and business integration such as:

Data growth and expansion

As adoption has increased the number of products with data available has increased dramatically. The IDEA Connector product data now exceeds 2.5 million SKUs, with over 350 data fields that can be used to differentiate products and facilitate sales and marketing effectiveness. Where IDEA Connector was used for core products and the most common products sold in the beginning of IDEA Connector adoption, now the IDEA Connector is used for a major percentage of products. From the current research, manufacturers are typically maintaining from 10,000 to over 50,000 SKUs in their catalog, while distributors are typically maintaining from 80,000 to over 400,000 SKUs. While active SKUs are generally under 80,000, some suppliers have over 4 million total SKUs in their catalog and make nearly 200,000 SKUs available on their website with associated content.

Business partner growth and integration

As the technology has advanced significantly and the amount of data available has grown, the incentive for trading partners to standardize the use of IDEA Connector has grown substantially. Smaller suppliers may work with hundreds or trading partners who may have thousands of locations. Larger suppliers may now work with thousands of trading partners. IDEA expects to continue to find ways to help manufacturers and distributors to work effectively together to manage the growth and improve the quality of operations.

eBusiness Systems Integration

With websites and eCommerce playing a far more significant role in marketing, sales and fulfillment, the IDEA Connector is the critical key component required to pull the eBusiness vision together. IDEA Connector can help meet customer demands for eCommerce content. The increase in capabilities for automation, self-fulfillment, and access to information throughout the customer lifecycle results in virtual elimination of errors and rework for the majority of customer transactions and establishes stronger relationships with partners and end customers that grow revenue and increase profits.

Speed of change

With larger data sets maintained in the IDEA Connector, the rate of changes, the updates and the amount of customized data have grown to levels that would otherwise not be sustainable or manageable. Instead, change and updates are comparatively easy, and ensure that the information is the highest quality. This enables suppliers to launch new products, create effective marketing promotions, and to tailor the products and services to key customer segments.

Accelerating digital eBusiness

A new breed of B2B customers is increasingly willing and able to research products, assess vendors, check availability, and compare prices before engaging with the distributor. A recent Forrester Research survey highlighted that by a margin of three to one, B2B buyers would prefer to self-educate about products and services rather than talk to a sales representative. The report went on to note that 75 percent of B2B buyers prefer to buy online versus through a sales representative. In this disruptive environment, incremental changes will not suffice, and yet 49 percent of B2B companies still do not have a mobile strategy.

Higher expectations for user experience

With the increasing consumerization of businesses, B2C expectations are very much driving change in B2B. E-commerce customers want intuitive, easy-to-navigate ordering platforms, together with high-quality product data and insight into inventory availability, a variety of fulfillment

The focus of these technologies has greatly expanded to facilitate a complete eBusiness transformation.

options (e.g., deliver to branch, jobsite, my location, a supplier's distribution center (DC) on consignment, or pick up at will call).

Information is critical to com-

peting. Having good accurate product data is one of the items that can distinguish distributors and manufacturers from their competition, because the need to have the most current, up-todate information regarding an item—all the way from weights and measurements to compliance information—is absolutely critical. Online purchasing in personal lives increases expectations of faster delivery, notification, tracking, and access to product information and inventory.

BUSINESS ECONOMICS – FROM ORDER PROCESSING TO EBUSINESS

Over the past 15 years, the focus of technologies such as IDEA Connector and IDEA Exchange has greatly expanded beyond cost savings in the supply chain to new capability and efficiency enhancements in other areas of the business. This facilitates a complete eBusiness transformation to achieve the following results:

- Acquire and retain more end customers
- Sell and service more products for end customers
- Bring products to market faster and enable rapid changes and updates
- Leverage information to expand marketing capabilities, shorten the sales cycle or enable more self-service capabilities
- Build and maintain strategic relationships among suppliers, distributors and end customers

by enabling customer-centric business needs such as pricing and packaging

• Differentiate brands, showcase products and compete with behemoths such as Amazon and offer new types of competition

Economic Value Analysis of IDEA Connector and IDEA Exchange

An important aspect of this research update is to develop a framework to analyze how technologies such as IDEA Connector and IDEA Exchange impact the business from an economic perspective. While this specifically includes estimates for what the solutions cost to implement, plus the direct impact on operational costs such as maintaining product data and ordering products, there is significant evidence that the most important benefits of synchronized product data are derived from the ability to reach more customers and prospects with better offers for the products they are most interested in. As part of this project, Real Results Marketing and IDEA utilized information gathered from a cross section of manufacturing and distribution customers to create estimates of how organizations can expect to benefit from adopting and implementing IDEA Connector and IDEA Exchange technology solutions throughout their businesses.

Economic Value Model

The framework for analyzing the economic costs and benefits from using IDEA Connector and IDEA Exchange was created in a spreadsheet which included customer-specific assumptions about the customer such as:

Company Assumptions

Whether the organization is primarily a manufacturer or distributor, which has an impact on how other assumptions are used in estimating the economic costs and benefits.

- Product Catalog. How many products, what percentage are included in the IDEA Connector
- Annual Revenue. Sales of products and services
- Growth rates for revenue and products
- Number of Trading Partners. How many companies share access to the company's product data, and how many use EDI for transactions

Order-Processing Assumptions

- Staffing-related expenses and efficiencies. Number and type of personnel, plus average wages for staff are used in calculations of labor savings or productivity improvements
- Assumptions for number of orders per day, lines per order, size of orders
- Average times to process orders without using IDEA Connector or IDEA Exchange, and improvements from using IDEA Connector and IDEA Exchange

• Handling errors, average error rates, costs associated with handling errors such as labor and time, delays, and lost or canceled business

Marketing and Sales Assumptions

- Impacts on sales from using IDEA Connector. Percentage of sales affected by using IDEA Connector, and how much improvement can be assumed over time
- Marketing Lift impacts. How much marketing improves online product search. How much having complete and useful product information available to customers and customer-facing personnel shortens sales cycle, simplifies customer decisions and increases the number and size of transactions with trading partners and end customers due to higher customer satisfaction.

The EVM model is flexible in its ability to specify assumptions about the business and the impacts

Perhaps the largest benefit comes from potentially dramatic improvements in marketing-related activities.

of using IDEA Connector and IDEA Exchange. For the study described below, we used assumptions based on a cross-section of manufacturers and distributors. This allows

the model and studies to be useful in discussions about how the business can vary assumptions to evaluate how optimistic the desired improvements would be under different business situations, such as adding more products, investing in more eBusiness initiatives, increasing personnel, opening more branches, or combining with other businesses to accelerate growth. The EVM model can be used to simulate multiple scenarios for planning purposes. As more experience is gained with the use of IDEA Connector and IDEA Exchange and the ability to leverage more product information and automation grows over time, the model can be fine-tuned to use more actual data to make more informed decisions and predict more accurate outcomes.

Scenario Analysis

For this analysis, the EVM model was used to evaluate how IDEA Connector and IDEA Exchange can improve the business for a selective set of typical manufacturers and distributors. For the purpose of this analysis a small, medium and large example was specified with assumptions about the size of the business, the amount of product data used, based on the model inputs and assumptions described above, in addition to the expectations for improvements (economic benefits) in the following areas:

Direct Benefits

Sales Personnel Effectiveness Improvements. For sales and customer service representatives (CSR) who interact with prospects and customers, this is a measurement of doing more with less. As time is freed up customer-facing personnel are able to conduct more revenue-producing activities with better results.

Product Manager Productivity Improvements. Personnel responsible for creating and maintaining

product data, as well as providing more ways to use product data during sales activities, for marketing content, and as part of eBusiness initiatives, are able to manage more products and use product data more effectively across the business.

Operations Efficiency Improvement. The model measures the impact of being able to process more transactions without requiring additional personnel, which simplifies growth and scalability of the business while maintaining quality and customer satisfaction.

Indirect Benefits

Reduction in Errors. One major impact of using IDEA Connector to maintain up-to-date and accurate product data has been to dramatically reduce or eliminate ordering errors both in frequency, and, more importantly, the overall cost to the business and to customers. The EVM model measures the combined effects of loss of productivity, delays and lost business.

Marketing Lift. Perhaps the largest economic benefit from using IDEA Connector and IDEA Exchange comes from potentially dramatic improvements in marketing-related activities. Marketing activities can have a higher return to the company by increasing the number of customers who find products they are searching for quickly and easily online. The sales and customer service personnel as well as online tools are able to promote additional products for upsell and cross-sell opportunities to increase the size and profitability of orders through market basket analysis using better product data. Easy access to higher quality product information has a direct impact on whether customers return to the business more often and do more business instead of looking elsewhere or leaving altogether.

The following section illustrates how the EVM model was used to estimate the impact of IDEA Connector and IDEA Exchange on representative manufacturers and distributors.

Assumptions

The tables starting on page 14 are used to compare assumptions about different sizes of representative examples for manufacturers and distributors. In addition, there are common assumptions that are shared across the models including:

Costs for IDEA Connector. The annual subscription costs for deploying IDEA Connector range from under \$10,000 to \$75,000 depending on the size of the organization's product catalog. In addition, there are nominal startup costs per customer. Costs of deploying dedicated hardware and software or cloud infrastructure are excluded from the calculations here, but would be a consideration in a total cost of ownership (TCO) analysis.

Costs for IDEA Exchange. The annual costs for IDEA Exchange range from approximately \$7,500 for the smallest customers to over \$150,000 for the larger ones. IDEA Exchange costs are mostly dependent on the volume of data transported over the network, which depends on the number and size of transactions. For this analysis, the model considers assumptions about the number of orders, the percentage of orders that are automated using IDEA Exchange, and the average

transaction sizes based on general averages of customer usage across representative businesses. For companies that use IDEA Exchange more extensively the costs could be higher, but we also assume that the benefits would increase accordingly.

Wages and personnel costs. We assume that average hourly wages for customer service representatives (CSR) are approximately \$20/hour, and for more professional personnel such as product managers the average hourly wage is \$35/hour. The model adds payroll burden on top of the salary amount of 40 percent.

Order-Entry Assumptions

The model makes assumptions about the average cost of entering orders both in terms of time and dollars. For the scenarios modeled here, we assume the following:

• Average order entry time was 10 minutes

The most resourceful and creative businesses today are using technology such as IDW and IDX.

• Error rates based on surveys and customer estimates range from under 1 percent to as much as 10 percent for very manual and

paper-based organizations, depending on the medium used to access product data. For this analysis we assume most businesses have improved since the early adoption of digitized data, but that errors during the order process are still a significant occurrence. For the scenarios modeled, we assume order rates average 1 percent of orders overall.

- For the scenarios modeled, when errors occur the model estimates an average cost of \$200 which includes estimates for personnel re-work, customer interactions, product returns with shipping and handling costs, and perhaps most important lost sales.
- Based on experience with IDEA Connector improving the customer ordering process by providing easy access to accurate product information for the majority of orders, we assume that we are able to reduce the error rate by at least half, so we use an estimate of 50 percent error reduction in modeling these scenarios.

Marketing Improvement Assumptions

Marketing Lift includes the combined impacts of more effective marketing campaigns and promotions to increase new customers and more orders from existing customers, increasing customer loyalty and satisfaction, and the ability to put more products in front of customers that match what they are interested in.

Marketing Lift is measured in the model for these scenarios as an increase in top-line sales adjusted to estimate the bottom line (net) profit impact. Typically Marketing Lift is estimated in the range of 0.5 percent to as much as 5 percent, depending on how well we improve core business or increase the breadth of products we can sell effectively using better product information.

For the scenarios modeled here, we assume a 2 percent increase in net revenue averaged over five years. Marketing Lift is 2 percent with a range of 0.5 percent to 5 percent.

The set of assumptions about company size and operational performance is based on multiple industry sources, and experience with customers using IDEA Connector and IDEA Exchange including surveys and interviews. For assumptions about improvements, the model attempts to use conservative ranges in order to estimate reasonable expectations, as well as to enable the model to illustrate how sensitive the estimates are to specific assumptions.

Manufacturer

Business Size	Small Manufacturer	Mid-Sized Manufacturer	Large Manufacturer
Number of SKUs (Catalog)	2,500	60,000	300,000
Percentage SKUs in IDEA Connector	100%	100%	100%
Annual Revenue	\$25,000,000	\$100,000,000	\$300,000,000
Number of Trading Partners	50	100	150
Average Orders per Day	200	350	750
IDEA Connector Annual Cost	\$10,000	\$37,500	\$75,000
IDEA Exchange Annual Cost	\$20,000	\$30,000	\$50,000

Distributor

Business Size	Small Distributor	Mid-Sized Distributor	Large Distributor	
Number of SKUs (Catalog)	8,000	20,000	1,500,000	
Percentage SKUs in IDEA Connector	80%	80%	80%	
Annual Revenue	\$20,000,000	\$50,000,000	\$250,000,000	
Number of Trading Partners	50	100	200	
Average Orders per Day	100	200	400	
IDEA Connector Annual Cost	\$10,500	\$12,000	\$75,000	
IDEA Exchange Annual Cost	\$20,000	\$30,000	\$75,000	

Benefits

These improvements may be measured as a combined result of improving customer loyalty and satisfaction, improving marketing efficiency and ROI, and improving the ability of the business to upsell and cross-sell more products.

The Economic Benefits and Costs estimated in the EVM model are defined as follows:

Net Present Value (NPV) is a useful way to account for the overall investment in the solution together with the expected economic return to the company relative to the cost of capital in comparison with other opportunities the company has to invest in the business. It is calculated in the EVM model as the present value (PV) of the five-year cash flows (net of taxes). It uses the conservative cost of money at 15 percent and tax rates of 35 percent to include any overhead incurred by the business.

These improvements are the result of improving customer loyalty and satisfaction, marketing efficiency and ROI, and the ability to upsell and cross-sell more products. Annual TCO. This is the Total Cost of Ownership for each year, which includes the annual subscription cost for IDEA Connector, the costs for annual transaction volume for IDEA Exchange, and nominal startup and annual overhead costs for

maintaining the subscriptions inside the company. For the analysis of these scenarios it does not include infrastructure costs such as internal hardware/software systems or hosting services costs which would be required to support the solution. This is done to maintain a comparison of just the IDEA Connector and IDEA Exchange solution components. In reality, the business would consider expenses related to its IT operations as part of the total analysis.

Five-Year Benefits. The benefits are calculated annually and are presented as a five-year cumulative benefit, which may include adjustments for corporate growth rates and assumptions about improving efficiency and yield in each of the benefit areas. This means that the first year is typically less than the fifth year for most benefits measured. We could estimate each annual benefit, but this may misrepresent the ratio of TCO to benefits slightly and may not accurately illustrate the startup time to implement the solution and yield a positive benefit, or time to payback or break even. Note that some of the benefits such as personnel productivity are measured as net of expenses. Other approaches would include the baseline cost of personnel in the TCO calculations and show benefits by differences in TCO across the project time frame. While some organizations prefer to focus on TCO savings alone when evaluating solutions for business, there is strong reason to focus instead on how solutions such as IDEA Connector and IDEA Exchange impact positive business metrics such as sales revenue, customer growth and retention, and bottom line profitability. The modeling approach used in this project intentionally illustrates positive impacts attributed to the solution.

Productivity Improvements. The EVM model estimates productivity improvements as savings for key personnel including customer service representatives (CSR) and product managers (PM) by

calculating average time savings multiplied by average salaries. The model simply calculates the effect of reducing personnel time spent on tasks related to handling customer orders during order processing and managing product information.

While in some cases, one may assume that fewer personnel are required and that staff reductions are in order, in reality, personnel are able to manage more customers and products as the business grows, which means new hiring can be deferred. More importantly, productivity savings means that people are able to devote more time to high value activities, which sell more products and services, and which dramatically increase customer satisfaction and loyalty. These activities have a direct positive impact on revenues, profit and growth.

Operations Improvements including reductions in errors account for a significant benefit from deploying IDEA Connector and IDEA Exchange, especially in combination. Better product data that is more complete, more accurate and includes additional helpful information speeds the ordering process while reducing or eliminating unnecessary errors that cause delays and lost sales. By being able to automate or reduce the number of steps involved in processing orders and invoices, operations are able to reduce time-to-cash and free up staff to focus on more critical and more strategic activities that benefit the business.

Marketing Lift includes all the ways the IDEA Connector and IDEA Exchange increase sales, profits and growth by enabling marketing functions and activities. Improvement in online search by providing more product terms and information can be dramatic. Targeted marketing based on customers who purchase specific products is much easier with up-to-date detailed product information. Having the right information handy when interacting with customers significantly raises the customer satisfaction level because sales and service personnel are more knowledgeable and responsive to customer needs.

While operational benefits are clear and measurable, it is important to realize that the ability to increase business performance in terms of sales, profits and growth is an even more significant result of deploying the IDEA Connector and IDEA Exchange solutions. The economic benefits relative to costs for each scenario are shown on page 17.

Manufacturer

Scenario	NPV	Annual TCO	Five-Year Benefits	CSR Productivity	Product Manager Productivity	Operations Improvement	Reduced Errors	Marketing Lift
Small Manufacturer	\$437,961	\$30,600	\$1,100,302	\$118,503	\$207,345	\$122,430	\$99,461	\$552,563
Medium Manufacturer	\$1,096,272	\$42,100	\$2,580,558	\$237,006	\$518,362	\$244,860	\$198,923	\$1,381,408
Large Manufacturer	\$4,372,437	\$151,500	\$10,212,472	\$474,012	\$1,943,856	\$489,720	\$397,845	\$6,907,039

Distributor

Scenario	NPV	Annual TCO	Five-Year Benefits	CSR Productivity	Product Manager Productivity	Operations Improvement	Reduced Errors	Marketing Lift
Small Distributor	\$706,829	\$30,100	\$1,673,512	\$237,006	\$80,994	\$244,860	\$198,923	\$911,729
Medium Distributor	\$2,267,596	\$67,600	\$5,227,068	\$414,761	\$388,771	\$428,505	\$348,115	\$3,646,917
Large Distributor	\$6,198,623	\$125,300	\$13,979,672	\$888,773	\$485,964	\$918,225	\$745,960	\$10,940,750

Conclusions from Economic Value Modeling

The economic value analysis illustrates that the financial return from implementing IDEA Connector and IDEA Exchange technologies far exceeds the costs of implementation and maintaining the solutions. While the earlier adopters of the technology aimed to reduce operational expenses including order processing and errors that occur during the transaction process, as companies are moving to more eBusiness processes, the benefits from marketing activities that increase sales by making it easier for customers to find the products they are most interested and keep customers coming back is by far the most significant evolution in having up-to-date, complete and accurate product data. Even modest assumptions about marketing impacts provide substantial benefits.

By combining both the product information benefits of IDEA Connector with the process automation benefits of the IDEA Exchange solution, the operational benefits from a streamlined supply chain improves the business of all participants in the transactions from the manufacturers that source products through the distributors that make shopping and procurement easy to the ultimate end-customer organizations that are able to serve their customers better than ever before.

The modeling approach allows prospective users of the IDEA solutions to demonstrate rapid payback and increasing economic benefits over a multi-year time-frame. Finally, while even small manufacturers and distributors achieve significant economic benefits, as organizations grow through organic growth or by consolidation, it is apparent that larger organizations benefit even more dramatically due to having more products, more customers and more transactions which benefit from the IDEA solutions.

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