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A TRANSFORMATIVE VIEW OF THE INDUSTRY BACKED BY A RIGHT-SIZED SOFTWARE SOLUTION CAN HELP ETO COMPANIES TAKE ENGINEERING AND PRODUCTION EXCELLENCE TO THE NEXT LEVEL

Engineer-to-order companies create incredible value for their customers by putting specialized expertise, innovative engineering, and advanced project manufacturing operations to work. However, many ETO firms are not yet taking advantage of the best of modern business management technology. Others may invest in software that does not fit their business or provides capabilities they don't need. Industry and technology experts at Sikich have developed an ETO-ready solution and a low-risk, rapid, and predictable approach to deploying it. In this ebook, we discuss how to achieve the right software fit with Sikich HEAD**START** for ETO and what results you can generate by using it.



THE ETO INDUSTRY FACES A DIGITAL LAG

Engineer-to-order (ETO) companies make it their mission to perform challenging manufacturing projects to produce the industrial assets that allow other companies to be in business. They design and build machines that can make other machinery or machine components, or they manufacture machines that make certain end products from a combination of materials and components.

ETO companies prize intellectual property as a key asset. It may take the form of machine patents and innovations, specialized expertise in how to meet the needs of customers in their target market, or unique engineering and manufacturing processes and equipment required to create the machine products these customers need. ETO companies invest heavily in developing and maintaining the expert skills and production capabilities that can translate materials and components into profitable, competitive customer solutions.

In contrast, ETO firms may not always be aware of the opportunities of technological innovations and modern digital-infrastructure solutions that could help them manage their operations—especially if they have been successful and enjoy long-standing customer relationships. That can result in the juxtaposition of advanced, machine-driven or even roboticized engineering and production processes with oversight by project managers who juggle numerous spreadsheets or multiple, older software tools. Redundancies and errors are common when project managers record and retrieve information in and from multiple resources. For them, just like for finance teams, account execs, or company leadership, it can be difficult and time-consuming to use these basic tools to assess the status of projects and see how they perform against financial forecasts and committed budgets and schedules.

In addition, many ETO companies use specialized, standalone engineering and production systems that are no longer state-of-the-art, and were customized to meet their specific requirements. Almost by definition, these require ongoing investments of labor and funds to keep them useful. For new employees, they can be baffling to learn and navigate.





THE NEED TO SATISFY CUSTOMERS AND RETAIN TALENT

Over years of business and many projects, these inefficiencies usually result in costs an ETO company might prefer to avoid. They also make it harder for project managers to have productive conversations with customers. A customer might want to ask for a quick project update, explore an idea, or have a question answered on the fly. If you need to manipulate a sheaf of spreadsheets, that can be difficult.

In addition, customers may have to update their requirements with little advance notice. The resulting change orders can boost project costs and lengthen production schedules. Skilled project managers usually can rally their resources and accommodate unexpected turns. Even so, margins can suffer and customers may not be satisfied with their vendor's ability to work with them when change orders cause delays and drive up costs.

At a time of generational change in the workplace, you may also want to think about what you can offer the candidates and recent hires who expect to use modern technology to do their jobs and pursue their career goals. For them, empowerment can take the form of software tools that help them serve customers, be productive in their area of accountability, and take the initiative for innovation. You can motivate and enable talented people by giving them the tools and data to make this possible. By winning their loyalty as satisfied employees, you may gain a lasting competitive advantage.



FINDING THE BEST FIT OF ETO OPERATIONS AND MANAGEMENT SOFTWARE

When ETO companies face the limitations of basic, general-purpose software tools and processes that hail back to pre-digital times, they sometimes decide to go all out with modern technology. That's when they may find that there aren't many viable options when you want to find a comprehensive business management system created for ETO and configure-to-order (CTO) firms that are not large enterprises. Midmarket companies may get the idea that they have just two choices, neither of them optimal: they can update their current, fragmented software tools with more powerful and usable solutions and make process changes to become more efficient. Or, they can invest in an all-in-one enterprise resource planning (ERP) system, which may come with too many capabilities that do not fit their business.

In the first case, they may still need to address data and process gaps between specialized systems which are not integrated. In the second, they will have to make adjustments to fit standard software to their needs. That may require finding skilled consultants who can make the right modifications and ensure that these will be easy to manage for the company as software updates and business changes happen.

Faced with these choices, many ETO and CTO companies acquire software systems that provide them with more capabilities and options than they need. They may then see a small and intermittent payoff in efficiency and productivity improvements from their large investment. If the software was not engineered with the needs of actual users in mind, it's almost certain that some project managers and other team members will not use it. They will stick to their spreadsheets or find workarounds.

BUILDING A SOFTWARE FOUNDATION IN THE CLOUD

Sikich is a technology and business consultancy with a deep commitment to manufacturing. We feel that **ETO** and **CTO** companies should benefit from a software solution that is a better match than either disparate, specialized applications or a large-scale ERP system with a deployment length that may not be acceptable for companies' intent on generating tangible, quick time to benefit. However, some well-reviewed and widely adopted, standard ERP solutions could serve as a foundation for the industry software we envision. One of them is Microsoft Dynamics 365 Business Central, a modern, evolving system from one of the industry's leaders.

Business Central is a modern ERP system that companies can implement in the private, public, or hybrid cloud as well as on-premises. Microsoft has continuously strengthened and refined it, and the Sikich practice and expertise has grown and matured along with it. Business Central comes with extensive functionality to power a business, including project management, finance, sales, services, and supply chain. It's modular, so you can follow your priorities in deploying the capabilities you want, and you can choose whether to deploy on-premises or in the cloud. **Business Central interfaces, functionality, and workflows are designed for people in real business roles.** The solution provides insight and visualization tools that help them make sense of business data to answer questions and fuel decisions. The system integrates with the Microsoft 365 apps that many companies use, such as Excel, Outlook, Word, PowerPoint, and Teams. You can create and share documents or work with colleagues and customers, pulling information from Business Central into the software tool on your screen.

For many companies, Business Central is transformative, allowing them to focus on what they do best while becoming smarter and more agile. Following a roadmap for evolving the solution, Microsoft continues to enhance it with scheduled updates twice a year. Companies can extend Business Central by drawing on the resources for business intelligence, app development, automation, and virtual agents on the Microsoft Power Platform.



From beginning to end, Sikich HEAD**START** for ETO unifies the many processes and actions involved in designing, manufacturing, shipping, and servicing an ETO product.



AN ERP SOLUTION TAILORED FOR ETO REQUIREMENTS

Business Central is the starting point for our ETO software, Sikich HEAD**START** for ETO. With this solution, you can gain many efficiencies by entering information only once, seamlessly linking processes, and making the business more transparent and manageable. You can do away with spreadsheets and multiple, specialized software tools as you direct and connect sales, production, and post-delivery services. From beginning to end, the solution unifies the many processes and actions involved in designing, manufacturing, shipping, and servicing an ETO product.

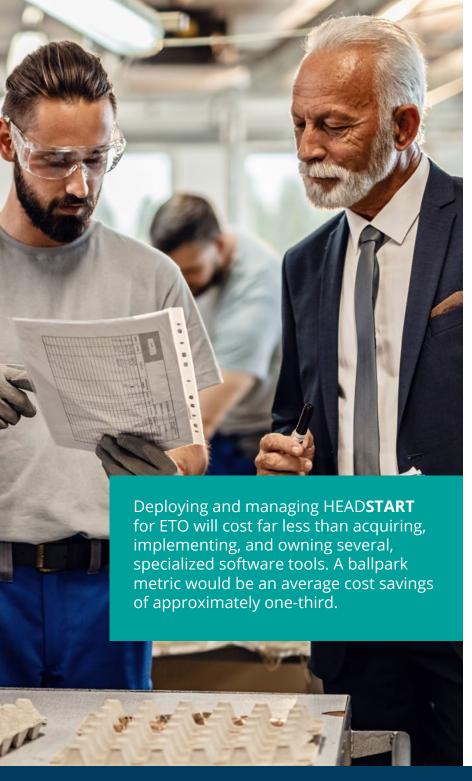
Our industry and developer teams created many features to fit Business Central closely to the common requirements we have documented in our work with ETO businesses. We configure and deploy it just as effectively for CTO companies. Most of our enhancements are in the jobs and manufacturing modules of the ERP software. Here are some of the capabilities HEAD**START** for ETO adds to Business Central:

 The solution supports the most involved and challenging bills of material (BOM). If your multilevel BOMS have thousands of lines, some of which could themselves be complex components and subsystems, you always have complete visibility of the status of a manufacturing project. At a glance, you can review project performance in regard to the metrics that matter to you and your customers. You always have an accurate estimate of the time required to complete a project, no matter how extensively or how often change orders and other adjustments play into the undertaking.

- Comprehensive project management capabilities are specifically designed for the industry. For example, HEADSTART for ETO lets you estimate projects before they turn into jobs, calculating costs without impacting real BOMs and production workflows. You can compare projects from your business history to help in your planning and account development. You have the flexibility to adjust project structures, easily accommodating multiple purchase orders, specific billing milestones, and other conditions.
- HEAD**START** for ETO makes it easy to **accommodate engineering change requests** by automatically updating BOM and project details for the new requirements. If you need to take additional steps, you have the visibility to intervene immediately at the right junctures of planning or production to adjust course, with clear projections on what the impacts on budgets, schedules, and supply chain dependencies are.
- **Billing relies on system data**, so it can always be complete, accurate, and timely. You can adjust it to what customers prefer, reflecting such considerations as project milestones, percentage to completion, and time and materials.
- Thoroughly tested third-party integration software tools allow you to transfer BOM and routing information from your AutoCAD system into HEADSTART for ETO. Without having to verify and re-enter data, you save time and can accelerate your process.

- You can **define quality metrics** for your products and product components and pinpoint variances in the manufacturing workflow. A standard non-conforming report points out deviations from your quality parameters and highlights effective corrective actions. You can promptly take the right steps to avoid customer satisfaction issues, minimize material or financial waste, and prevent quality flaws in future production.
- Engineering specifications and drawings, and documents related to processes, policies, machinery, facilities, employee training, or other aspects of your business can be available in the **knowledge base** of HEAD**START** for ETO. You can update content as you wish and use document versioning to keep earlier renderings available. You have a complete audit trail for document changes, and none of the insight or expertise reflected in documents are ever lost accidentally.
- At the end of the manufacturing process, you need to ship your product to the
 customer's location. Requiring capacity and commitment from trusted logistics
 partners, shipping can be a high-cost, unpredictable activity. In HEADSTART for ETO,
 you can treat this essential step as a part of the project, planning engagements with
 shipping carriers, costs, and schedules together with production activities. You can
 include shipping for parts and subcontracted production items with the logistics
 management for complete items.
- You can **automatically create service items** once you ship a product, smoothly transitioning into after-sales care. You can set up and manage service contracts, track service histories and upcoming scheduled services, and invoice at the right time.
- Using the field service functionality in HEADSTART for ETO, you can manage warranty services and other service work in a streamlined, uncomplicated manner, reliably dispatching technicians with the right skills to customer sites.





PREPARE FOR SAVINGS AND EFFICIENCIES

Our ETO clients don't always see the need to allocate resources and time to document the return on investment (ROI) or the total cost of technology ownership (TCO) of their Business Central ERP, compared to what they used previously. However, Sikich consultants have interviewed them to understand their experiences and the ROI and TCO outcomes they achieve with HEAD**START** for ETO. We find that deploying and managing HEAD**START** for ETO will cost far less than acquiring, implementing, and owning several, specialized software tools. A ballpark metric would be an average cost savings of approximately one-third.

Through years of use by your employees, you save costs and time every day because people can do their work in just one software solution that is designed to be easy to learn and comfortable to use for real-life business roles.

When it comes to costs and business productivity, we should more closely consider product configuration software and customer relationship management (CRM) systems, both important to many businesses.

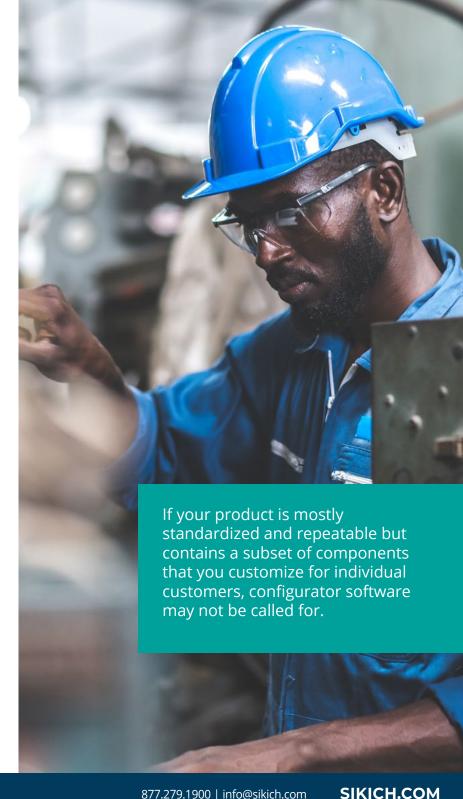
CHOOSING BETWEEN EMBEDDED OR STANDALONE CONFIGURATION TECHNOLOGY

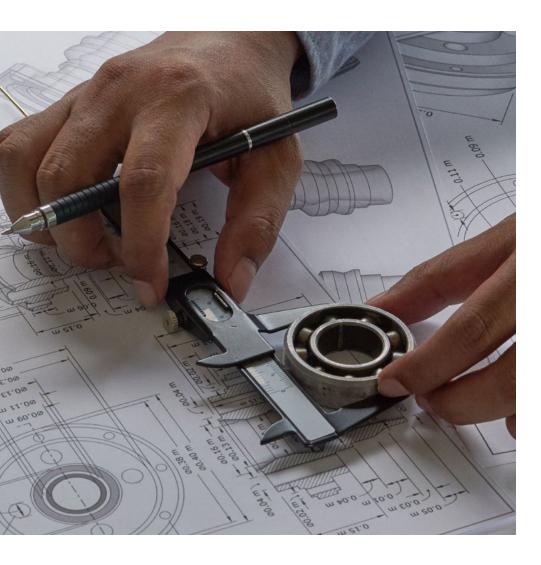
Product configurators are a potentially business-critical application. ETO and CTO companies are often tempted to purchase more configuration functionality than they require, similar to how they acquire ERP software. Solution vendors offer a number of excellent configurators, and Sikich will deploy a configurator together with an ERP solution when that makes sense.

However, the software can require a large up-front investment, and scripting the logic rules for it and managing it within your ERP environment will require time and skills you either need to own or contract for. In many companies, it takes the equivalent of one full-time, skilled employee to manage the configurator software. We may be able to help you avoid those costs and complexities.

HIDDEN COSTS OF CONFIGURATION SOFTWARE

At Sikich, we have seen too many situations where companies purchased a configurator and never got around to creating the logic for it. As a result, the software languished without bringing value to the business, and sometimes users and IT practically abandoned it. If your product is mostly standardized and repeatable, but contains a subset of components that you customize for individual customers, configurator software may not be called for. Instead, HEADSTART for ETO will most likely be a good fit for you. Your team members can do their jobs and manage projects within a single solution and won't have to learn and navigate multiple systems. However, if every one of your products is a customized combination of possible options, you may be better served with a high-end configurator.





Clients sometimes tell us that they acquired configurator software because they wanted the best possible tool to facilitate product configuration. Stakeholders and consultants may argue that a company's needs may change and become more complex, and purchasing advanced configuration software beyond what is currently needed can be a kind of future-proofing measure. However, for most companies, these highly tentative benefits will not justify the expense and administrative overhead of a configurator system. What makes more sense for them is **matching technology to the workings of the business.**

RIGHT-SIZING YOUR CONFIGURATION FUNCTIONALITY

A Dynamics 365 ERP environment in the cloud can flex and scale to include extended functionality on the same platform. Sikich clients have saved costs, reduced administrative workloads, and still gained the right configuration capabilities by deploying HEADSTART for ETO. Our solution can pencil out favorably even if you decide to replace your existing, overly complex configuration tools and start over. For companies that have invested in configurator software and find that it requires too much time and effort from IT managers and business users, Sikich can help achieve a turnaround that provides exactly what the organization needs.

TO BUY OR NOT TO BUY CONFIGURATION SOFTWARE

Some recommendations when it comes to choosing a configuration software vs. using the configuration capability that comes with your ERP system:

Be sure to have an in-depth conversation with your consultant about this important issue. Your technology partner should be able to help you assess your requirements and make a sound case for either solution.

Engage with consultants who can offer and support a range of solutions. Consultancy-based advisors who only have configuration software in their arsenal will not be able to recommend anything else. Sikich can help you with either configuration software or the best choice of an ERP system that comes with configuration functionality. Your business needs and such requirements as having to support customers making configurations online should drive the decision.

As mentioned, if your engineering team repeatedly rebuilds the same components while leaving the rest of a product unchanged, HEADSTART for ETO will likely be the right fit. However, if every new product requires new engineering design from the ground up, you may be better served by configuration software.



CRM CAPABILITIES THAT FIT YOUR BUSINESS

In recent years, given the strong emphasis on high-quality customer experiences as a competitive advantage and the increasingly high expectations customers have for the companies they do business with, CRM systems have become ever more powerful and richly featured. They can support large volumes of customers, transactions, and account events. Companies also use them to run targeted marketing campaigns that may involve many thousands of contacts.

However, most ETO businesses operate quite differently. For one thing, they don't manufacture commodity products for sale to thousands of customers. A typically individualized sales process precedes the planning and production. ETO firms often serve closely defined market segments with partly customized, high-ticket items. To be of value to them, a CRM system must have the right fit with their approach to managing accounts and serving customers.

The CRM that is part of Sikich HEADSTART for ETO gives you all the tools to manage and nurture customer relationships. You can track and store product details, contracts, communications, promises, approvals, and other elements of customer engagements. From new leads that turn into prospects who receive a quote or a proposal and turn into customers, and on to delivering services, you can manage the entire life of your accounts in Sikich HEADSTART for ETO. Once created and recorded, account data lives in the solution, accessible to users across business groups. Business reporting and analytics can draw on CRM data together with any other information that resides in **HEADSTART** for ETO.

THE BEST POSSIBLE RESULTS FROM YOUR TECHNOLOGY ACQUISITION

Thinking about standalone CRM vs. CRM capability embedded in your ERP system is very similar to considering configuration software. Sikich consultants and solution architects can help you make an informed decision. Potentially, deploying both a CRM and an ERP system can double your deployment and management costs. Conversely, replacing a barely used CRM technology with CRM as part of an ERP may greatly reduce expenses.

CRM systems improve customer retention rates, which leads to a profit increase of 25% to 85%.





CRM SOFTWARE CAN BOOST SALES BY **29%**, PRODUCTIVITY BY **34%**, AND FORECAST ACCURACY BY **42%**. When companies overestimate the complexity of their processes and business conditions, they over-provision and don't receive the benefits of their software investment. We sometimes find that organizations use barely a tenth of the functionality of their expensive CRM software, and will usually recommend switching to a solution that fits them more closely and has a better ROI.

The embedded CRM in HEAD**START** for ETO gives you a 360-degree view of your customers and supports the complete account lifecycle. However, if multiple sales reps on your team discuss challenging, extensive technical details with customers, a fully-fledged CRM product may be appropriate. If you're thinking of CRM as a business priority for a technology modernization, followed by an ERP deployment and an integration of the two, we can help you plan the entire initiative and keep it financially and operationally sound.

Employee productivity can improve when the software tools in your workplace are simple and few. With CRM as a component of your ETO business management system, people can enjoy working in a productive, unified technology environment. Newer employees can rely on the CRM component to assist customers without going through lengthy reviews of account histories or additional training. Both new hires and current employees moving into a customer-facing role may be motivated by their ability to be effective in working with customers today rather than tomorrow.

Your customers, in turn, can benefit from a **seamless relationship experience**. No matter who they talk to on your team, they will meet people who understand their relationship with the business and who can assist them without requiring them to re-introduce themselves.

TAKING CARE OF CUSTOMERS AS A COMPETITIVE ADVANTAGE

ETO and CTO companies typically build their reputation and success on excellent products and long-standing customer relationships. For many of them, turnover among customers may be minimal and competitive challenges relatively uncommon. However, your customers could potentially be at risk. When key people who practically own customer relationships leave the workforce, you need to maintain the best possible quality and continuity in your dealings with these customers, or their loyalty might suffer. Using your CRM tools, you can manage team transitions smoothly, recording all account-related documents, communications, customer details, and next actions.

Those measures also make it possible for your team to take those small, extra steps and maintain your company's unique touch in serving customers—without causing additional costs or using significant time. They can take the initiative in offering a higher-quality part, a better cost, or an earlier service appointment if they see an opportunity. When the wear and tear on machinery or machine parts requires a timely replacement or service visit to avoid production slowdowns or interruptions, they can proactively work with customers and eliminate headaches for them. Or, if the changing availability of materials or other events force a change in a manufacturing project, your employees can immediately approach customers and mitigate delays or other unwanted consequences.

When you use the CRM functionality in HEAD**START** for ETO consistently in your customer engagements, over time you can elevate the skills of your customer-facing employees and develop a more flexible, individualized approach to sales, service, and marketing. Those improvements, in turn, can be invaluable as you plan your business and manage customer accounts to continue creating value. You may also find that HEAD**START** for ETO allows planning and resource efficiencies that make it possible to offer your customers additional, profitable services in addition to machine maintenance.



improved customer relationships by using CRM

Source - IBM

FUTURE-PROOFING YOUR TECHNOLOGY

As Microsoft continues to refine and extend Business Central, delivering major upgrades twice a year, Sikich evolves HEAD**START** for ETO. In the Microsoft partnership, Sikich has early visibility of upcoming solution enhancements and often shares the requests and feedback of ETO companies and industrial equipment manufacturers with the Microsoft development teams.

As we build on to HEAD**START** for ETO, **we follow the stringent quality standards Microsoft has set for partner solutions.** We perform extensive testing to verify that we meet technical criteria and indeed can help customers achieve their functional goals. We never modify or customize the original Microsoft code, but create additions and extensions to augment it.

For companies using or considering HEAD**START** for ETO, the high level of discipline in the Sikich and Microsoft collaboration means that they don't need to worry about the risks of barely tested, unproven innovations. Your production and business environment may never be as challenging as the testing that HEAD**START** for ETO and Business Central undergo. **You can also be confident that you will be able to use the solution in conjunction with other Microsoft technologies,** such as Power Apps. Finally, just as important, HEAD**START** for ETO follows a well-aligned roadmap for additional capabilities. The solution can support you far into the future of your business and the ETO industry.





REVIEWING SYSTEMS AND PROCESSES BEFORE DELIVERING THE NEW ERP SOLUTION

Part of future-proofing an important undertaking like an ERP deployment is ensuring that the business is ready to take that step. As part of your deployment project, Sikich consultants will review your technology environment to assess its cloud-readiness and security posture and suggest adjustments to mitigate your risk and ensure a smooth implementation.

Before you deploy a solution like HEAD**START** for ETO, it's also worth your time to assess the processes in your business and make note of any opportunities for improving them. Even before you make significant technology changes, you may be able to improve the company's health, efficiency, and productivity by reviewing its current workings and introducing practical, nondisruptive adjustments. For many clients, Sikich performs business process alignments (BPA) to review their operations in comparison to the best practices in the industry's most successful and established organizations.

When you revise your business processes and roles based on a Sikich BPA, your operations can become more efficient and value driven. Your software deployment will align more closely with your goals and deliver tangible benefits in less time than if you were to transition your current-state processes to a new technology platform.

PARTNERING WITH SIKICH

Our consultants deploy Sikich HEAD**START** for ETO for you and provide the training to help everybody use it comfortably. They perform any needed integrations with other business systems and migrate data from legacy software into HEAD**START** for ETO. Many Sikich clients use design software such as AutoCAD. We use a well-tested third-party software product to pull information related to your BOMs from AutoCAD into HEAD**START** for ETO, and we continue to develop and standardize integrations to other CAD systems.

Our deployments incorporate the experience of hundreds of successful ERP and other complex software projects. We know how to keep the effort moving quickly toward a successful go-live. Going by what we've seen and heard from clients, HEADSTART for ETO deployments are less costly and roughly six months faster than those of comparable, alternative solutions. One variable in this is the extent of needed configurations, although your internal team will likely be able to take care of most of these. Deployments as well as training can happen virtually, through the cloud.

ENSURING USER ADOPTION

Even with modern software that incorporates findings from thousands of research hours with users in real businesses, **you still need to plan how you want to pave the way for people who may be used to a certain style of working and communicating.** You need everybody to be on the new software platform at the same time, without shadow IT or workarounds. It may take an outreach effort to accomplish this. Sikich helps you create a communications plan to drive rapid, confident adoption and work with the most important influencers in the company to showcase the potential payoffs of the new software system. For IT team members, it will be important to see that HEAD**START** for ETO presents low demands for ongoing maintenance compared to more traditional ERP systems. Automatic updates and centralized management in the cloud greatly reduce the workload of day-to-day administration.



HEAD**START** for ETO deployments are less costly and roughly six months faster than those of comparable, alternative solutions. Deployments as well as training can happen virtually.



TAKING THE NEXT STEP

When you decide to document your requirements and review possible ERP solutions for your ETO or CTO business, be sure to involve all the stakeholders who should have a say. The executive team has to be on board with the effort. The CFO and finance managers will need to help everybody assess the true financial benefits and costs of a software deployment and the associated changes in how the business works. IT, of course, should weigh in on the functionality, dependability, security, and manageability of the systems you consider.

It's also important that your company's head of engineering and key influencers from the engineering team participate in discussions, solution demos, and decisions. They will have critical considerations and questions that can make a difference in your choice and the results of an ERP purchase and deployment, and nobody else will likely have their informed perspective. In fact, if a potential technology vendor is not asking for engineers to be involved, take that as a warning sign.

Is it time to have an exploratory conversation about our solution or arrange for a demo? Here are some next steps:

- Contact the Sikich team.
- Watch a video about some capabilities of HEADSTART for ETO on our YouTube channel.
- Learn about Sikich's ERP services.
- Follow us on LinkedIn, Twitter, and Facebook.





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ABOUT SIKICH

Sikich is a leading professional-services firm that is among the top 1 percent of all enterprise resource planning solution partners in the world and ranks as one of the United States' Top 30 CPA Firms. Sikich is also ranked as number 9 in the country's top 100 technology providers. To every project, Sikich ERP and CRM experts contribute more than 30 years of team experience and an outstanding track record with a success rate of 97 percent. Sikich partners with the industry leaders, including Microsoft, NetSuite, and Salesforce. Sikich is a Microsoft Gold and Microsoft Dynamics Inner Circle Partner focused on delivering technology solutions for tangible business improvement and organizational excellence.

To learn more about Sikich, go to www.sikich.com/technology or contact info@sikich.com.

