

Legacy Systems: Weighing the Costs, Benefits and Risks

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Most replacement systems will, or at least should, provide marginal benefits over your legacy system.

According to an online definition, “A legacy system is an old method, technology, computer system or application program that continues to be used, typically because it still functions for the users’ needs, even though newer technology or more efficient methods of performing a task are now available.”

But for food and beverage processors, another more realistic definition applies: It’s a system that works. It may be old and creaky, but nontechnical executives typically view it as “tried and true.”



Replace, renovate or add-on

Too often, if you have a legacy system, the only option that comes to mind is to replace what you have. However, other options exist, including doing nothing, doing some renovation or adding on functions.

Whenever you consider a replacement, you must compare your reasons to the realities of this decision. Those realities include cost, disruption and risk. You have to pay the cost of buying and installing the replacement system. Plus, you have to face the risk of disruption and a typical dip in operational efficiency and effectiveness before, during and after the implementation. Will the new system really be better by an amount that justifies the cost, disruption and risk?

If you decide to replace your existing system and then add on functions to improve your business (see story below), remember the time involved in implementing the replacement system means the ROI from the added function is delayed. (You could try to implement both the replacement system and new components at the same time, but are you willing to accept the risk and even greater disruption in doing so?)

The existing system is part of your day-to-day operations, so you need to make absolutely certain any replacement system functions as well as or better than what you already have. If you’re looking for a replacement system as a way to get new functions, pick a system that provides acceptable functionality in the areas you want to upgrade. Although the offerings from integrated vendors have improved to the level of functionality of the best-of-breed-vendors specializing in a single area, the exact function you want and the specifics of your business may mean an integrated vendor is not up to the challenge.

A renovation means you stay with the same vendor and product and reinstall or update to the most current release. Like any business decision, pluses and minuses exist.

Not having to pay for new software is a plus; however, a vendor will often demand some money to allow you to get the newest release. The implementation will be simpler than the first time or with a new vendor or product. For example, users know the basic system and will only have to be trained on the changes; many of the required decisions have been made, so data conversion may not be an issue or be a minimum challenge. Of course, you should rethink business processes and data issues, but most of the

decisions, training and data will still be valid.

As part of a renovation, consider new functionality added to the existing system in later releases or from newer modules. For many of these functions, much of the groundwork has already been done, and implementation will be less burdensome.

For some companies, the motivation for renovating a system is to eliminate existing modifications and the limitations and expense associated with them. Often, the requirements that originally drove your modifications have been addressed in the current release. But if modifications are still required, they will have to be addressed.

What are the minuses of a renovation? You still have the old system, but you get some upgrades. However, some of your needs may not be fulfilled via the renovation route because the vendor never addressed certain issues. A very realistic issue is user acceptance. If the old system currently gets the blame for business problems or affects morale, your organization may not accept any solution that carries the old name.

If you add the functions you require to the existing system, you can proceed directly to implementing the functions that will deliver ROI. That project will have to consider integration of the new function to the existing system, but the overall schedule is typically shorter and costs less.

You have two sources for add-on functions: the vendor of your existing system or an independent supplier typically known as best-of-breed. Historically, the best-of-breed option has had better function, and the single vendor option has had better integration. However, both these observations are questionable in today's market.

The major advantage of going with your existing supplier is that the new software should work with the old software. Although you will normally be forced to upgrade the existing system to the current release, the new function's information and business process should be integrated, supported and maintained by your existing supplier. The reality is that the existing vendor should have better integration and will bear the cost of maintaining that integration.

This is important since integration is a major cost when using the best-of-breed option. The selection of an add-on product must include the ability of the product to integrate with the existing systems. Was it built to be integrated? What integration technology does it support? What are the cost and risk of maintaining the integration? How long will the integration take? Part of the integration trade-off has to do with the quality of the integration. Therefore, the question for the best-of-breed option is, "Can these products be integrated in a practical way?" Practical does not mean best; it means acceptable given all the other trade-offs that have to be made. You will have to live with integration code that will need maintenance and duplicate files that may get out of sync, the finger pointing between the two vendors when one or both of the two systems are not working correctly and two new release cycles that will prove to be always perfectly out of sync.

In general terms, applications that take data from systems and never put any information back, like business intelligence, are the easiest integrations. Putting back highly formatted data, like a forecasting application, is more difficult. The most challenging integrations are those that interactively work with more complex systems, like warehouse management.

An example of a company serving the food industry that has done both renovations and additions is Emerald Performance Materials. The company produces and markets additives for a broad range of food, personal care and industrial applications, enabling these products to last longer, look, smell, taste or perform better. Product lines for food and beverage applications include preservatives, colors, foam control and other ingredients.

Emerald's IT strategy includes a core ERP system called PRISM from Infor. According to Jerry Oberdove, Emerald's director of IT services, "The PRISM system meets our needs; it is proven to be rock solid and

stable. It provides our operational systems like purchasing, customer orders, production, inventory and distribution. It also does an excellent job of costing.

“When we looked at alternatives, we did not find a replacement system that gives Emerald the marginal business improvements needed to justify the cost, disruption and risk of changing systems. In addition, we felt the approach we took could maximize the benefits from our legacy system and allow our businesses and staff to focus on key strategic growth objectives critical to generating greater value for the company.”

Emerald has surrounded PRISM with JD Edwards financial applications available from Oracle and a number of best-of-breed systems including Business Intelligence, Document Creation, MSDS and Pricing Analytics to identify “price leaks.”

For support, Oberdove says they have been relying on a third party, Precision Solutions Group, Inc. or PSGI. “PSGI is an integral part of our total solution. They support PRISM and the JD Edwards plus do related projects. Yes, they know PRISM, but they also know the food industry and the Emerald business.”

Should your legacy system be replaced? The first question is, “Does it serve your needs?” If the answer is yes, then justifying a replacement would be difficult. Often, people talk about why a new system would be better, so the right question to ask is, “What’s wrong with our existing system?” Most replacement systems will, or at least should, provide marginal benefits over your legacy system. Consequently, another fundamental question should be, “Do the marginal benefits outweigh the cost, disruption and risk of implementing a new system?” If the answer is no, consider renovating or adding on to what you have.

Executing the replace option

Peet’s Coffee & Tea of Emeryville, CA serves multiple customer channels with fresh roasted specialty coffees and teas. These channels include 200 retail locations, direct to consumer, nearly 9,000 grocery stores plus a large number of foodservice operators. During the past five years, the San Francisco Bay area company has doubled its revenue and today enjoys \$300 million in sales.



The company is proud of its competitive distinctions of roast-to-order and delivering the freshest products possible. It does not keep an inventory of ready-to-ship roasted coffee. Each day starting at 3:00 a.m., Peet’s performs the roasting for the orders that arrived from all channels through midnight of the previous day for delivery within 24 to 48 hours of the order submission.

What was wrong with Peet’s legacy systems? Shawn Conway, chief supply chain officer at Peet’s Coffee & Tea, explains:

- The system could not handle transaction volumes during peak periods, resulting in a negative impact on customer service.
- Different on-entry systems for each channel made consolidating orders for production a slow, error-prone and laborious task each day.
- Some elements on homegrown systems crashed, interrupting operations.
- Financial inventory was only updated once per month.
- The technology environment was complex and challenging to maintain.
- IT had an enormous workload keeping multiple custom-written, unconnected systems up and running and integrated.
- Business managers had reservations about the accuracy of the information.

Peet’s decided it could not continue to maintain both excellent quality and fast growth without making a change in its business management technology, simplifying its IT administration and giving business decision-makers reliable, current information. It also wanted to streamline reporting and compliance with

Securities Exchange Commission and FDA regulations.

“We wanted a single system that would let us reliably manage the quality goals we set, run as efficient an operation as possible and sustain the company’s momentum,” Conway explains.

To plan the software implementation for the most impact and meet the requirements of different business groups within the company, Peet’s began with a thorough, two-month discovery project. It noted everything it hoped to accomplish, took a detailed inventory of existing software and developed functional and technical requirements.

Peet’s created a request-for-proposal document and invited responses from technology vendors. It selected Microsoft Dynamics AX offered by Junction Solutions, a Microsoft Gold Certified Partner with expertise in and product offerings for both food manufacturing and multi-channel retail. Peet’s implementation spanned 18 months with the deployment of a single instance of Microsoft Dynamics AX together with the Junction Solutions software at the company’s business and production locations. Initially, finance, business administration, order management and other lines of business received the solution’s functionality. In the second phase, the solution was extended to production.

Peet’s now enjoys a business management solution that supports the company’s quality standards and enables it to keep growing. According to Conway, “Peet’s Coffee & Tea succeeds by combining artisan skills and technological enablement. We did not automate anything that humans could do better, but Microsoft Dynamics AX and Junction Solutions’ technology help make sure our people and our products are at their best every day.”

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Olin Thompson is a principal of Process ERP Partners. He has more than 35 years’ experience as an executive in the software industry with a focus in process industry–related ERP, SCP, and e-business–related segments. Olin has been called “the father of process ERP.” He is a frequent author and an award-winning speaker on topics of gaining value, including ERP, SCP, e-commerce, and the impact of technology on industry. He currently provides consulting services to both end user and supplier organizations. He can be reached at OT@olinthompson.com.

