Manufacturers at the Crossroads:

ERP or Best-of-Breed Software?

ZONTEC

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In the quest for quality, selecting the right Statistical Process Control (SPC) Software system doesn't boil down to a simple functional "fit-to-requirements" anymore. Once the expert domain of highly focused, independent software developers, the competitive landscape has changed dramatically with the influx of big-name ERP software providers who are aggressively promoting integrated quality modules within an all-encompassing business application framework.

Unfortunately, today's buying process for SPC software has shifted away from quality control, waste prevention, productivity and competitive advantage and more toward "look-alike" technology alternatives, compatibility roadblocks, single-vendor sourcing and departmental politics.

When the solution becomes part of the problem

Because ERP vendors may be so firmly entrenched into an organization's hierarchy, many companies already have a bias toward these familiar technology providers and their seemingly convincing cases for one-stop shopping, interoperability and application manageability. With increased frequency, these issues cloud the selection process and often overshadow the best tool for the job. Furthermore, quality modules within an ERP infrastructure typically rank low on IT priority lists. Realistic benefits are months, if not years, down the line. In the meantime, business improvement is delayed indefinitely, Quality Managers become overly frustrated, manufacturing waste continues, and nobody wins—above all, the customer.

To make matters worse, some companies engage in elaborate evaluation and selection processes only to have the chosen best-of-breed software vendor vetoed in favor of the ERP solution in the end by top executives. In fact, in 42% of the cases when new business applications are under consideration, ERP is the default decision without even looking anywhere else.[1] Manufacturers that follow this course of action are squandering major opportunities to differentiate themselves and sacrificing real market potential.

Analysts agree overwhelmingly that best-of-breed technologies are clearly superior to ERP offerings. "In terms of functionality, ERP solutions today generally have fewer capabilities than best-of-breed solutions," writes Dan Gilmore, Editor-in-Chief at *Supply Chain Digest* and a former analyst at Meta Group, IT's second largest research and advisory service. His assessment gives the edge to best-of-breed developers in the areas of functionality, ease of use, domain expertise and overall value.

A research study by Bhargava et al. at the Binghamton University Department of Systems Science & Industrial Engineering concurs: "Most enterprises that use ERP systems struggle to integrate the functions of its Quality Management (QM) module with real-time data collection, analysis and reporting. The minimal functionality and cumbersome user interface available in the QM module make the task difficult, if not impossible."[2] To overcome these deficiencies, the organization may turn to Business Process Reengineering (BPR) efforts, a highly IT-intensive direction that is neither immediate nor inexpensive. After all that is said and done, what is truly gained?

Given that ERP systems aren't all that flexible, and lack the real-time shop-floor orientation required for immediate process feedback, but the corporate mandate is *still* to make use of their substantial investment in ERP, then the organization may be forced to change its process to fit the system.

ERP and their slow pace of innovation

"The big ERP companies have no incentive to add features. They prefer to buy the pieces they need or make announcements about partnerships," says Bruce Richardson, Chief Research Officer at Boston-based AMR Research. This strategy often makes the ERP product line more confusing to buyers since there is a potential overlap when a third-party product is overlaid onto an existing ERP quality module. "It's frustrating that the pace of innovation in the industry is tied to the pace of the largest players."

"Even though SAP and Oracle invest $3-billion a year in R&D, the rate of innovation on the application side is still low," continues Richardson. "Because when the big guys announce something, it's years away. . . . There's a disconnect between what the large companies want to do and what they can do."[3]

Best-of-breed SPC software developers "are more nimble in terms of product development because they don't have all the baggage of an ERP," notes John Van Decker, Vice President of Technology Research Services at Meta Group.[4] That agility is their crucial

edge. "They [Best-of-breeds] don't have to deal with their own global infrastructure like ERPs do or spend as much time training their sales force."

With such high stakes in delivering product quality and services, how long can organizations afford to wait when they can address the needs they have today and still build the foundation for requirements they may have in the future?

Getting exactly what you want today

A highly proven SPC solution with an enterprise-wide scope is indeed available today. And software evaluation committees need to look no further than Zontec, the premier name in statistical process control software, with nearly a quarter-century of experience in quality assurance, manufacturing applications, engineering and computer science.
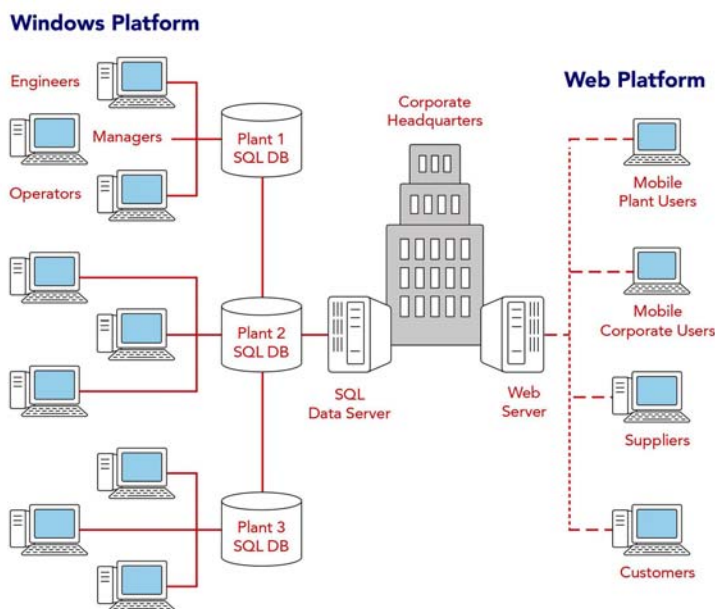
Zontec's Synergy 3000™ is the SPC software system for the company seeking a real-time global view of their quality data across multiple manufacturing facilities. Synergy 3000 represents a new computing model for quality assurance applications and becomes the quality industry's first SPC software system based entirely on Microsoft's strategic .NET™ computing platform.
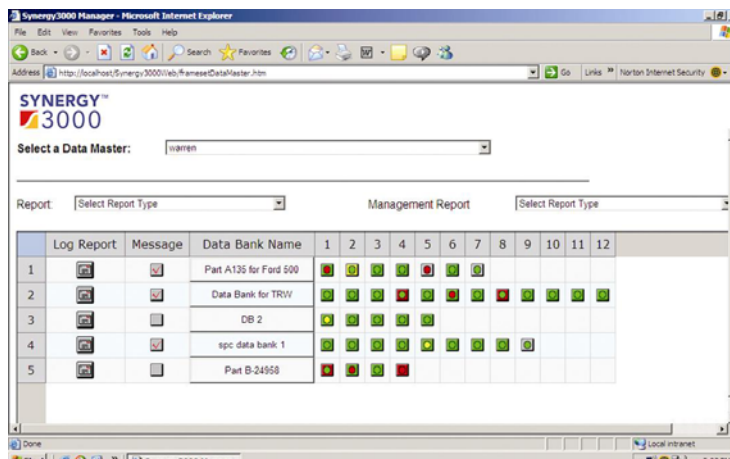
With Synergy 3000, users can:

- collect and store quality data in a system that features a high performing native SQL database engine
- monitor their processes in real time for a single or an unlimited number of processes simultaneously
- receive immediate feedback via SPC charts, process alarms and e-mail alerts on a Windows-networked PC or by logging onto their Web browser
- make process adjustments on the spot
- query the data in multi-dimensions and analyze results
- generate highly detailed quality reports spanning production floor snapshots of the data to flexible management-level summaries
- manage supplier quality

One of the key reasons why Synergy 3000 is such a practical and functional tool is its unique Four-Level Architecture that encourages seamless collaboration and teamwork in the name of quality. Synergy 3000 recognizes the individual roles and responsibilities for each type of process participant. Operators receive a level of the program designed for data collection and corrective action. Quality Managers and Engineers take advantage of exclusive features that support elaborate sampling plans and analyses. The Manager Level is focused on enterprise-wide monitoring and reporting for actionable decision-making. The Administrator Level is the IT-driven component for Synergy 3000. Here, users configure the SQL database, network and web servers, establish user accounts and assign privileges. Together, the four levels empower users to readily satisfy their quality goals.


Industrial strength technology

More than a mere data collection and charting program, Synergy 3000 is industrial-strength technology through and through. Defect tracking, traceability, trend and root cause analysis, overall equipment effectiveness (OEE), rolled throughput yield (RTY) are all fully implemented in the software to sustain the most demanding continuous improvement program.

Mobile employees, their customers, suppliers and business partners can perform real-time global alarm monitoring, charting, reporting and analysis on their quality data by simply logging onto their web browser.

In addition, Zontec recognizes the many information environments where production and quality data can reside and addresses the integration of this data using the Synergy 3000 DLL. The S3K DLL is a library of pre-fabricated software plug-ins that significantly automate the programming, customization and testing of application front-ends for Synergy 3000 by the user's IT Department. The S3K DLL is the communication link for quickly achieving interoperability and connectivity with ERP systems, SQL databases, supervisory control and data acquisition (SCADA), manufacturing execution systems (MES), laboratory information systems (LIMS), and virtually any external data source.
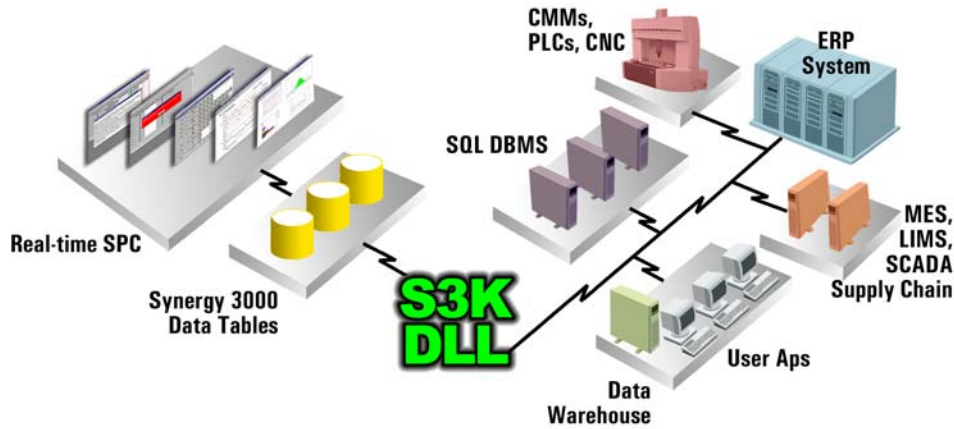
Over the years, ERP systems have been notoriously known for their extended deployment timetables and prolonged time-to-value. As a result, buyers mistakenly expect SPC software systems to be no different. Zontec doesn't believe organizations should buy into the notion that an SPC implementation takes months to install and configure before

it can be rolled out to users. Unlike an ERP system, Synergy 3000 installs in *less than a day*. That enables users to get to the heart of predicting and preventing production problems immediately, and so that management can see rapid and dramatic contributions to bottom-line results.
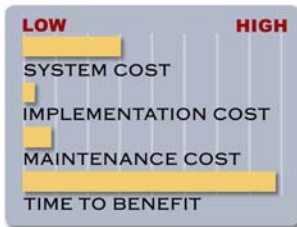
One ERP vendor who got it right

When Intuitive Manufacturing Systems, a leading ERP solution provider for discrete manufacturers, wanted to enhance its quality offering in 2002, their familiarity with Zontec's powerful technology made it the logical choice for the development of an OEM relationship. "Our customers asked for a sophisticated quality data gathering analysis module that allowed them to manage their processes from an enterprise perspective," recalls an Intuitive executive. "At the same time,

Well designed SPC systems display real-time alarms, interactive charts, traceability tags and corrective actions in a single window. Reports, event logs, queries, engineering drawings and access to various document formats are just a mouse click away.

we had a responsibility to provide our customers with software that is designed on Microsoft platforms and is highly intuitive. We believe we met this challenge with Zontec." Using the S3K DLL, Intuitive development staff created the interface with their ERP infrastructure, and in a matter of days, had achieved full integration. Zontec SPC technology is now a popular tool option for Intuitive's customer base and has been private-labeled as "Intuitive SPC."

The good news for manufacturers wanting to quickly address quality, waste, and production issues is that Best-of-Breed solutions aren't million-dollar software investments. According to Martin W. Michael, Vice President at system integrator, Advanced Automation Associates, there are reasonably priced systems on the market that can provide the information you need today and will scale up for future growth.[5] "Even if the plant manager is waiting for corporate to decide on a long-term MES implementation, the [Best-of-Breed] approach practically guarantees the solution will be reusable in the enterprise long term," he points out.

When manufacturers find themselves at the crossroads of choosing an ERP quality system or a Best-of-Breed SPC solution, experts set their course with the latter. Choices are out there, but not all SPC vendors qualify as Best-of-Breed. Astute manufacturers will seek out those providers who have committed themselves to innovation, R&D and the latest development technologies. The best of the best will have demonstrated mission-critical performance among globally connected sites and a highly productive user community. As a long-term partner, technology companies like Zontec will become the manufacturer's competitive advantage.

References

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