

Slow down to speed up

by Peter Bolstorff

Why an application's built-in best practices don't always work — and what to do about it.

The first time I heard any details about the ERP system my employer had selected was at the kick-off meeting. The primary business case behind it was to reduce corporate IT costs based on a **fast track implementation**.

In this case, fast track meant taking 12 months to change the behavior of a few thousand employees representing more than 20 businesses, each with annual sales ranging from \$50 to \$250 million.

I looked around the meeting room to see who was going to make this huge change. Most of the attendees held corporate functions, such as customer service,

purchasing, infotech, finance and logistics. Others included external consultants, internal supply chain consultants (a group of people, including myself, in the newly created role), and the project leadership team. (Much later, I came to realize that most fast-track projects have highly

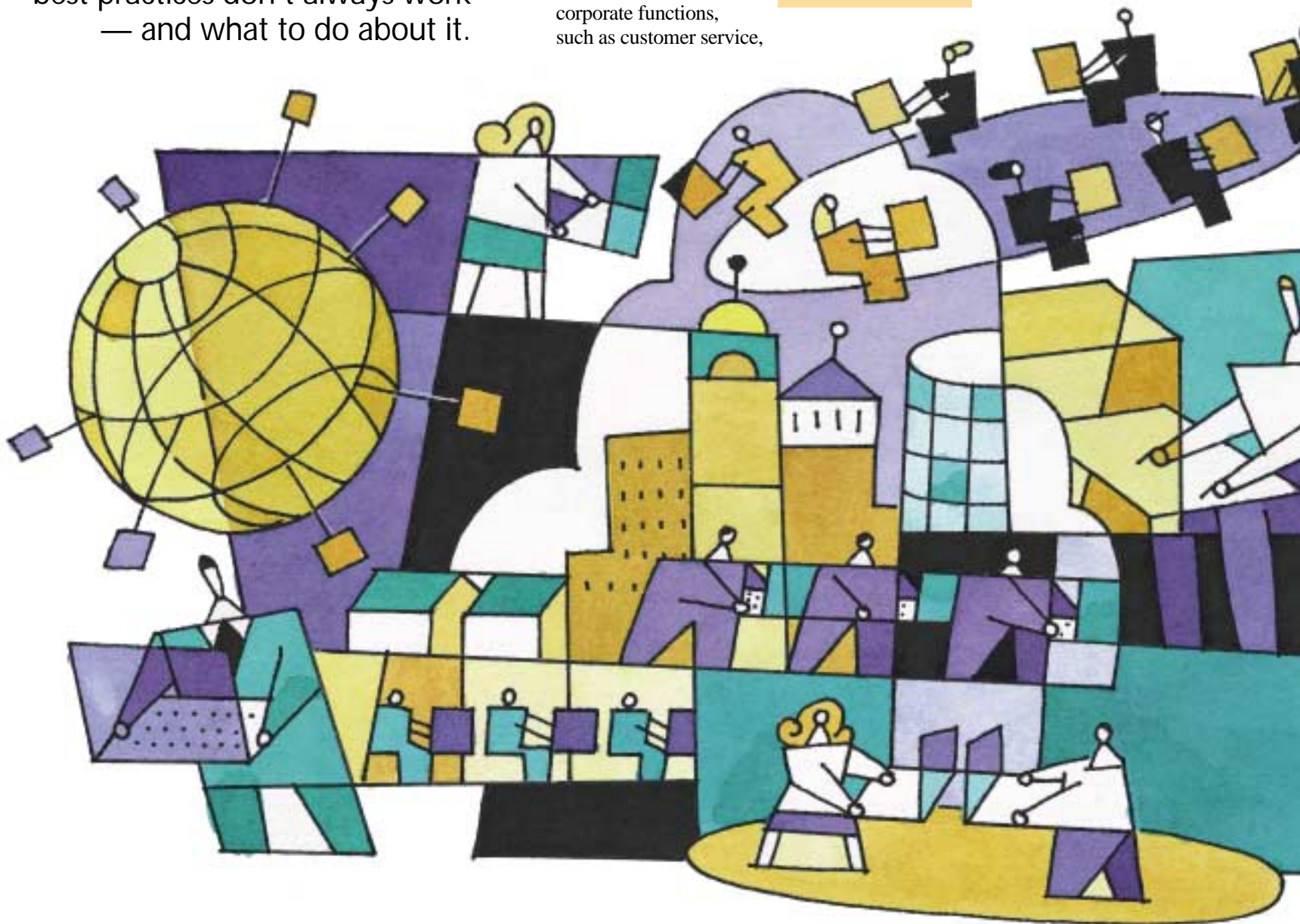
centralized, project program offices filled to the brim with these same functions.)

To my consternation, there were very few business folks.

It was typical of what happens at the beginning of such projects at many large companies. With executives under pressure to produce

What is SCOR?

The **Supply Chain Operations Reference** model, developed by the Supply-Chain Council, provides a standard methodology for managing supply chain projects.



JargonSolved

- APS:** Advanced planning and scheduling system
- ERP:** Enterprise resource planning
- SCOR:** Supply Chain Operations Reference, consisting of 4 integrated processes: Plan, Source, Make, Deliver
- WMS:** Warehouse management system

About SCOR

The Supply Chain Operations Reference model (SCOR) has been developed by the Supply-Chain Council and is SCTN's recommended implementation model for SCM initiatives. While the author of this article is affiliated with the Supply-Chain Council, this article was prepared under the direction of SCTN and was not subject to prior review or approval by the Supply-Chain Council or any of its members/affiliates.

results on a quarter-to-quarter basis, **supply chain engineering** is often pushed aside for the seemingly faster **software re-engineering**.

The mindset is to minimize the up-front investment by rushing software selection and implementation, and then allowing the best practices that are built into the software to re-engineer the company's business practices.

But it doesn't usually work out that way. Instead, you get a series of *disconnects* between the way the technology behaves and the way material, information and work actually flow in the business.

To close these disconnects, project teams often customize the software, which adds cost and time without

To learn more about the Supply-Chain Council: www.supply-chain.org
 For basic information about SCOR: www.supply-chain.org/html/scor_overview.cfm

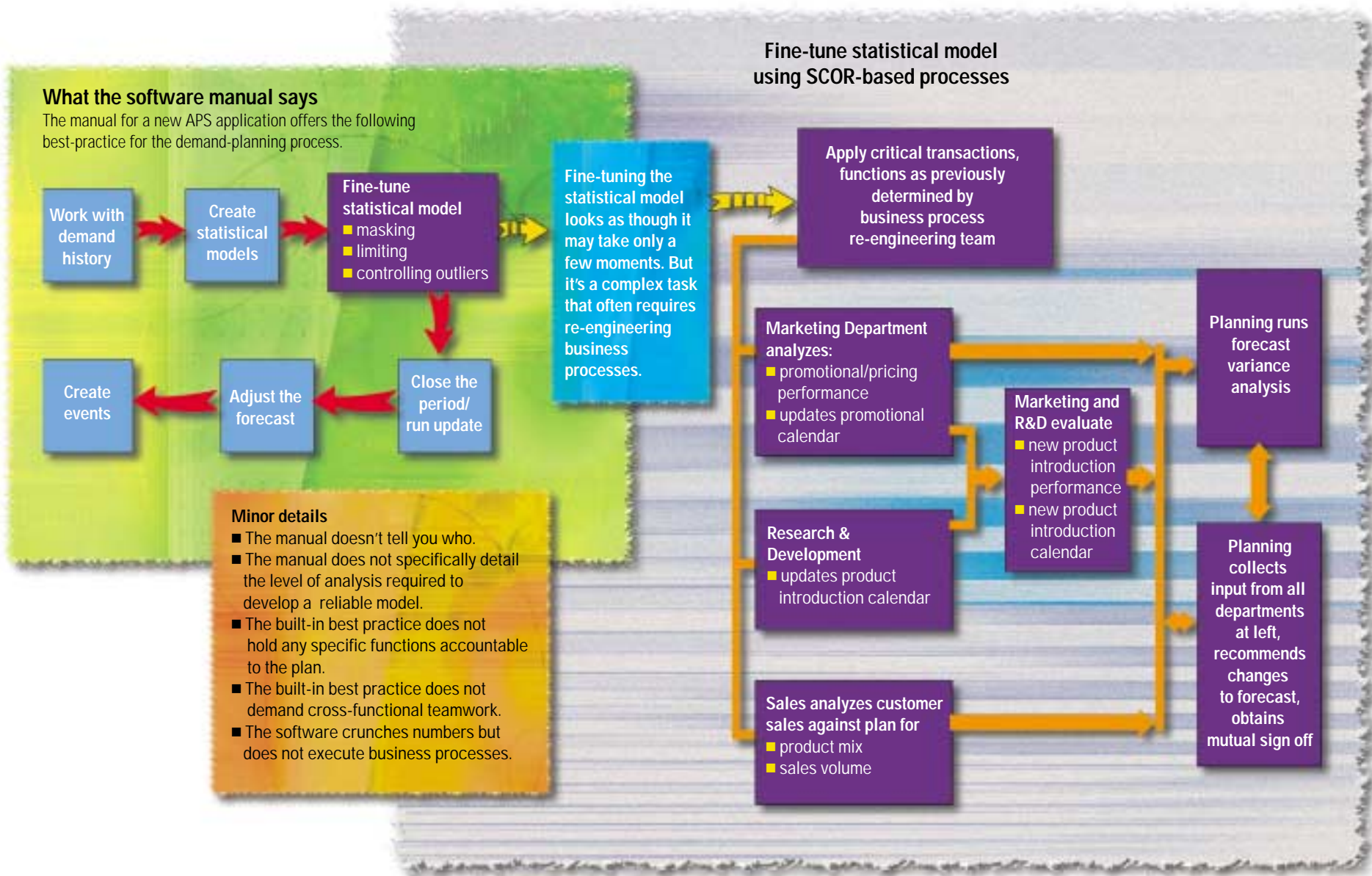
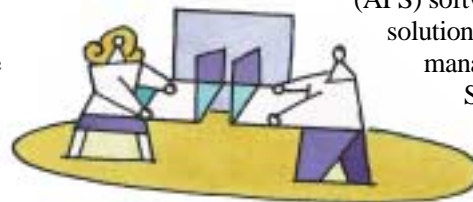
actually addressing the real problems.

Then, after 12 months or less — just as the board of directors is asking to see the ROI figures — the business folks start blaming the software for not working, while the infotech folks blame the users for not learning the software.

That's where the value of the SCOR model comes in. I would argue that it's best

to start with SCOR first, and use it to reengineer business processes. But since so many implementations don't happen that way, the good news is that SCOR can help an already troubled fast-track project, too, by resolving those ROI-killing disconnects.

I've been involved in two implementation projects that offer the perfect case study. Both used the same **advanced planning and scheduling (APS)** software (billed as the solution to supply chain management): one used SCOR before setting up the software, while the other started with the



software and was forced to apply SCOR to mop up the mess.

Let's contrast some key points from the two projects, based on SCOR's **four-step supply chain engineering methodology**, which provides the framework to align technology investments with business performance. (See box: *Learning points*, p. 58.)

Based on this methodology, Step 3 — **align performance levels, practices and systems** — is where technology and business are brought together, and where fast-track projects tend to get into trouble.

There are five major activities in the alignment step.

Activity No. 1

Define Organization: Who does what?

The **fast-track team** defined its organization based on system functionality and on post-implementation software support. This resulted in creation of three positions: *demand planner*, *supply planner* and *software super user*.

The proactive **SCOR team** defined its roles and responsibilities based on the integrated supply chain business processes of **plan, source, make and deliver**. This occurred before the software set-up. While new positions weren't created, the following departments were brought into the process: *marketing, sales,*



manufacturing, logistics and some elements of *new product development*.

Activity No. 2

Map Level 3 process elements: How does work and information flow?

Fast-track team: People in each of the newly created positions were assigned to learn the software, then set up, test and execute the process steps as defined in the workflow sections of the software manual. Some of the steps were: update item master; consolidate forecast history; run month-end forecast; adjust forecast for extrinsic factors. Because these four steps took place in the *demand planning* section of the software manual, the job fell to the new *demand planner*.

SCOR team: It was discovered that the business team had four distinct forecasts: a unit forecast for manufacturing, a revenue forecast for sales, a mix forecast for marketing and financial forecast for the general

manager. Each had its own set of processes, independent of the software. It was a flawed process. The SCOR team effectively mapped these elements of SCOR's **plan process** to produce a consolidated and agreed-upon forecast.

Activity No. 3

Define and connect critical transactions: What is the output?

Fast-track team: Definitions were provided by the software itself, and were so extensive that by the time the team considered interfaces between the new APS system and existing ERP and WMS applications, it seemed like there were a thousand transactions and information loopholes to manage every time a forecast was run.

SCOR team: Critical transactions were defined, and so were supporting management issues. That allowed team members to manage information that *wasn't* well defined. In the end, the team identified only 20 critical transactions in the entire supply chain, of which only four or five were related to advanced planning.

For example, one critical transaction was *order confirmation* to the customer, as part of the available-to-promise process. One of the critical supporting management issues was accurate routings. The story is simple: Routings are critical to translate a demand forecast into a supply plan to meet customer delivery requirements.

Calendar

Nov. 17-18: Integrated Supply Chain Management, Palo Alto, Calif. www.gscm.com

Dec. 8-9: Softworld Manufacturing and Supply Chain, Toronto. www.softworld.com

Dec. 14-16: eBusiness Conference and Expo, New York. www.ebusinessexpo.com

Feb. 6-11: AspenWorld 2000, Orlando. www.aspentech.com

Feb. 28-Mar. 1: Supply Chain Executive Retreat, Palm Springs, Calif. www.supply-chain.org

Apr. 9-14: CA-World 2000, including **interBiz World 2000**, New Orleans. www.cai.com

Apr. 10-12: Supply Chain World, Chicago. www.supply-chain.org

Apr. 16-19: Retail Systems 2000, including **VICS 2000, the Retail Supply Chain Business Conference**, Chicago. www.retailsystems.com

Apr. 16-19: Aspect Summit 2000, Scottsdale, Ariz. www.aspectdv.com

June 13-15: Supply Chain Expo and Conference, Chicago. www.supplychainexpo.com

Live to develop/develop to live

Nick Donofrio, senior vice president of technology and manufacturing at IBM, used the following list to conclude his presentation at Big Blue's *Solutions '99* technical developer conference, held in the heat of July at the MGM Grand Hotel and Casino in Las Vegas:

You know you're a software developer when...

1. Deciding whether to spend money on a gift for your significant other vs. upgrading your RAM is a moral dilemma.
2. As a birthday present, you bought your spouse a new CD-ROM.
3. You can type 70 words a minute, but can't read your own handwriting.
4. Your laptop computer cost more than your car.
5. When something goes wrong, you say, "Bug? That's not a bug. That's a feature."
6. Your wife drapes a blond wig over

your monitor to remind you of what she looks like.

7. You bought a Captain Kirk chair with a built-in keyboard and mouse.
8. You would rather get more dots per inch than miles per gallon.
9. No computer store salesperson can answer any of your questions.
10. You look forward to going to Las Vegas in the heat of the summer to attend a software conference.

Learning points

- Although best practices are designed into software, they can't automatically re-engineer your business upon installation.
- Newly integrated software can uncover poor business habits. The tendency is to modify the software instead of changing the habits.
- Implementation goes faster when processes are designed before the system set-up.

SCOR's 4-step methodology

Step 1: Analyze basis of competition

- Competitive performance requirements
- Performance metrics
- Supply chain scorecard
- Scorecard gap analysis
- Project plan

Step 2: Configure supply chain

- AS IS, TO BE material flow
- AS IS, TO BE material process flow
- Cascading design specifications

Step 3: Align performance levels, practices and systems

- AS IS, TO BE work/transaction/system flow
- Disconnects
- Cascading design specifications

Step 4: Implement supply chain design

- Institute business practice changes
- Develop technology solution
- Pilot and roll out total solution

Activity No. 4

Link system/applications: What system should be used?

Fast-track team: A sophisticated system map was assembled to define interfaces, fields, etc. It was technical in nature and covered four walls in a conference room. A general manager would take one look, smile and leave.

SCOR team: First, process elements from **SCOR Level 2** (the planning level) were evaluated for their role in the advanced planning function. In this case, the team applied **Plan Supply Chain; Plan Source; Plan Make; and Plan Deliver.**

Next, the team determined where those major software tasks — update item master, consolidate forecast history, run month-end forecast and adjust forecast for extrinsic factors — mapped into the next level of SCOR. In roughly 20 process steps the team was able to communicate precisely which steps needed to be performed by each function to produce a consolidated forecast.

Activity No. 5

Cascaded performance metrics: How'd we do?

Fast-track team: It could only say that by using the APS software effectively, inventory could be reduced — a goal that many others had on their plate as well. No time was taken to link and cascade the measures and, therefore, the system set-ups were wrong in inventory, routing, structures and item master.

SCOR team: Forecast accuracy was identified as a driver to three high-level metrics that were part of the company's **Balanced SCORcard:** improving service while meeting inventory and productivity targets. This SCORcard was linked to a

business goal, rather than a loosely defined corporate goal. Routing accuracy, updated promotional calendar, accurate item masters and sales plan performance were supporting metrics. **The point:** Performance of the software supported improved forecast accuracy, which supported profit-and-loss measures.

The moral of all this is simple: Sometimes you go fast by going slow. The **SCOR team** achieved functional use of the software in less than half the time as the **fast-track team**. The APS software started providing a cash return in a mere three months after the project started, while the fast-track team was still waiting for the first hint of a return after 12 months. ◀



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New products

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DC Optimizer from Descartes Systems

Group Inc. (www.descartes.com) allows companies to optimize facility layout and product movement; a ReWarehousing module lets companies re-optimize their distribution center (DC) operations on a continual basis. The software is designed to help users manage and optimize the distribution of goods, services and information throughout the extended enterprise by improving space utilization, reducing warehouse travel time and eliminating facility bottlenecks. It maintains a set of key performance indicators that alert users when re-profiling is required.

Intelliprise from American Software

(www.amssoftware.com) is an integrated supply chain/ERP product suite that includes three business intelligence tools. Supplier Performance data mart focuses on financial, quality and timeliness factors, and incorporates

intuitive displays for data mining to provide information on an enterprise's procurement processes throughout the supply chain. Channel Performance data mart reports on a company's sales channel, including measuring customer satisfaction, sales performance and profitability of products, distribution centers and customer relationships. Inventory Performance data mart addresses financial inventory valuations as well as inventory turn levels.

D-SCOR from Gensym Corp.

(www.gensym.com) models and simulates supply chains based on the SCOR model. Based on intelligent operations management software, D-SCOR allows organizations to evaluate the performance of alternative supply chain configurations, policies and practices based on actual operational data. It supports decisions such as make vs. buy, centralized vs. distributed operations, facility location, single-vendor vs. multi-vendor sourcing, and how to best respond to changes in the market.

IntraGlobe (www.intraglobe.com) has launched **e-BizChain** as a membership-based extranet system to enable supply chain e-commerce, based on open standards for broad-based transaction compatibility. It can be accessible via browser or automated system interface from any TCP/IP-based network (the Internet or a company extranet) and from virtual private networks, such as the Automotive Network eXchange (ANX). IntraGlobe supports EDI, XML, defined format and batch interface methods to enterprise and legacy systems.

WebMethods B2B 3.0

is a business-to-business integration product from **webMethods Inc.** (www.webmethods.com) that connects companies, B2B marketplaces and trading partners in extensive trading networks. A reusable architecture called B2B Services models business processes and operations, such as purchase order submission and order tracking. New integration modules for Baan, Oracle Applications, PeopleSoft and IBM MQ

Series allow companies to integrate with trading partners by providing a secure method for exposing enterprise application interfaces in XML formats over the Internet.

EXE eFulfill and EXE eCollaborate from EXE

Technologies Inc. (www.exe.com) are designed to meet the high order volume and customer service requirements of global e-commerce by converting the traditional warehouse into a multi-channel e-fulfillment center. Efulfill addresses the fulfillment requirements of business-to-consumer e-commerce, including global distribution, mass customization, make-to-order, value-added processing, merge-in-transit, crossdocking and returns processing. ECollaborate provides inventory visibility and distribution execution capabilities across distribution centers and trading partners. It leverages Internet messaging software and tools from IBM, i2 and Microsoft to provide visibility and control of a company's global product flows.