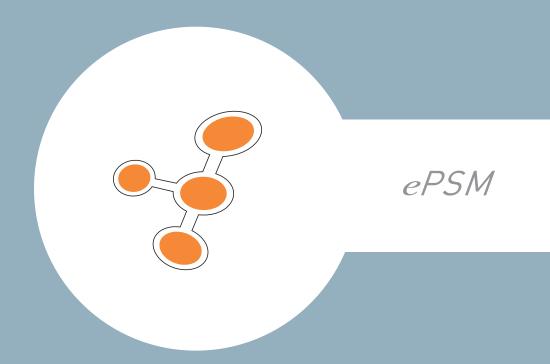
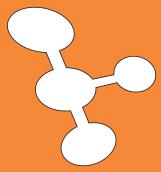
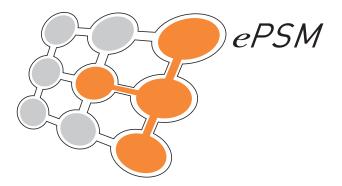
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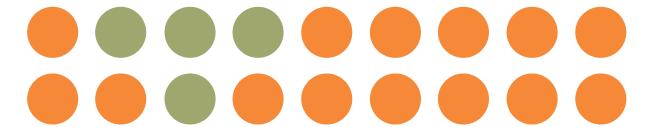




Date: Wed, 05 Jul 2000 19:52:32 From: Ulrich Fincke, Günter Fuhry

To: ePSM Team Subject:

E-HYPE VS. WORKING HYPOTHESES FOR OUR NEXT MEETING



Dear Team.

Just back from the purchasing conference in Birmingham. As expected, one topic dominated the meetings and the dinner tables: e-procurement and marketplaces. Everyday basics that still have to be dealt with, e.g., cross-functional teamwork, purchasing versus engineering, supplier development, organization, and measuring success etc., were practically ignored!

Let's hope the wave of hype has reached its crest, but Europe may (again) lag behind the US. In Silicon Valley (= meetings with key technology providers), one manager told us his company had been approached by a group of Swiss farmers who wanted a co-investment in their e-marketplace for hogs. Only for the Swiss market. Guess they hadn't run the numbers; just wanted to get in on the trend.

But where there's hype, there's hope for new value creation. No one doubts the power of the Internet to change procurement practices. Over the past year, whether to build, join, or buy from a B2B marketplace has become a burning question for CEOs (and COOs, CFOs, CIOs, and Chief Procurement Officers).

And they're increasingly asking when solutions and tools will extend from "indirects" and a narrow process focus to "directs" and a full TCO (Total Cost of Ownership) perspective. So, when we meet in Cologne, we want our discussion to focus on the evolutionary path for clients and our solution services under development around key themes. For instance:

- re: Future of e-procurement in direct material (customized design/content/processes).
- Question: Should companies go on experimenting with ePSM for indirects or totally focus on directs, for example, by outsourcing indirects?

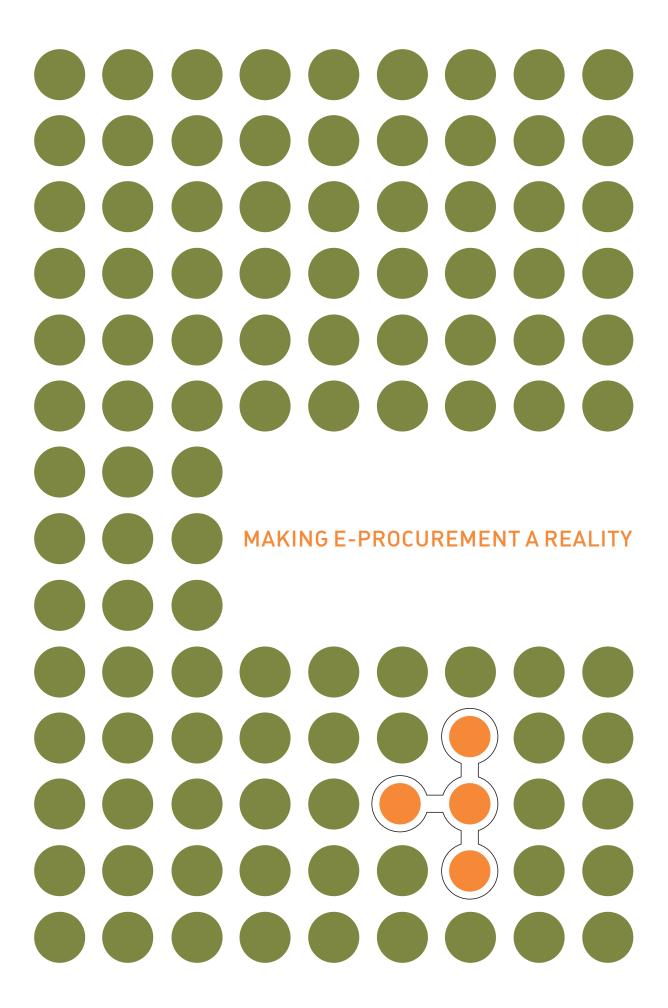
 Hypothesis: Focus on directs is right, but indirects could serve as an important shortterm training ground, and some indirects (services, maintenance, etc.) should be treated like directs with a TCO perspective.
- re: Top priority now is "solution services" building on next-gen tools (e-parameterization, e-concept competitions, TCO function generators, e-target costing, e-idea competitions...)

Question: Which tools will/should have their home in marketplaces vs. buy-side areas within marketplaces vs. exclusive solutions for individual companies? Hypothesis: Many small, independent marketplaces will disappear, but the "big announcements" with sufficient liquidity will still have to reinvent themselves as information and transaction hubs - with built-in exclusive buy-side areas offering confidential privileged content and processes. We'll also see truly private ("bilateral trade") solutions, with agreement on standards for information and transaction protocols. People will still want to keep granular cost data and high-level design work under wraps.



- re: Using software tools to automate routine, low-value-added work (e.g., retrieving ERP and CAx information) required to do high-quality strategic sourcing and thus make it scalable.
- Question: How can our clients/McK best accelerate automation, and what should a development path look like that also addresses the organizational issues? Hypothesis: The real challenge lies in institutionalizing e-enabled processes and changing the cross-functional organizations in a way that is strategy driven, not tool based. We should continue to address this with our clients. With software partners, we should continue to stress that an auction engine to support negotiations is always only a first step. Its value depends on the organization's strategic view of procurement from concept/design specifications to results tracking.
- re: Clients asking us where and how to start with e-procurement. Question: Why not tell them to wait until the "real solutions" are out there? Hypothesis: Because the task is more an organizational transformation than a pure software implementation! A wise strategy is therefore to create a number of "success stories" (pilot projects with different degrees of difficulty). Tangible successes are the best way to convince people and prepare the roll-out/transformation across the entire organization. In addition, tool development is expected to accelerate. So there is no better time than now to start the journey.

Looking forward to our discussion! Best regards, Ulrich and Günter



The Internet is revolutionizing purchasing and supply management, and doing so at the speed of light. The electronic marketplace – which barely existed several years ago – is flourishing. Analysts predict that Internet transaction volume in e-procurement will top US\$ 1 trillion by the end of 2003. Buyers are flocking to the online marketplace to achieve the real benefits of larger and more transparent supply markets, faster and easier transactions, and better integration with suppliers.

Whereas European companies once felt they could take their time developing e-purchasing capabilities, that is no longer the case. In order to realize the benefits of an e-enabled environment, all companies must be able to purchase on the Internet, and must develop this capability quickly.

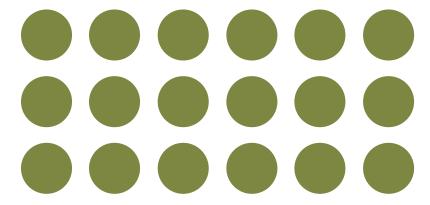
McKinsey's ePSM experts have been working with clients all over the world to help them manage the transition from the old to the new purchasing environment. Our strategy-driven approach, deep expertise in purchasing and supply management, and our experience across a broad span of industries have enabled us to help our clients navigate the complexities of making e-procurement a reality. \bigcirc

On the following pages we share with you some of the ways that companies are adapting to and shaping the new purchasing landscape, and offer some ideas for how to meet the challenges of the new environment. The first section of the brochure deals with how e-procurement may affect your purchasing strategy – how to think strategically about new tools, techniques, and alliances. The second section offers some thoughts about how organizations can adapt to the new ePSM environment. The third section contains thumbnail sketches of e-marketplaces and e-providers that have made their mark on the cyberscene.

Finally, we offer brief portraits of some "typical" members of our team – the people who are working, with our clients, to blaze new trails in the evolving e-commerce landscape.

It is our hope that this brochure will provide you with interesting food for thought as you endeavor to reap the benefits offered by the new era of purchasing. And we stand ready to work with you on an individual basis to bring our expertise to your company's unique situation.

Katarina Dempsey





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"Think it and do it"

We're not shy about telling people to "look before you leap" and "always start with a clear strategy." With the dynamics of ePSM, however, all our authors advise experimenting with the tools and technology - for both indirect and direct spend. Experiential learning is essential to discover how to combine ePSM efforts with your current strategy and how to translate the potential of e-procurement into ideas for new business models.

"Anticipating change"

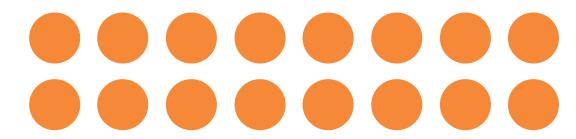
Michael Freienstein, head of hpi (Hoechst Procurement International), gives a firsthand account of the transformation of his purchasing department into an entrepreneurial company in its own right. In addition, we suggest some arenas, horizons, and roles to consider on the journey to "e-volutionizing" your purchasing organization.

"Site-seeing"

Homegrown solutions *are* an option. For ideas, take a quick tour of some hotspots and wellsprings of new business ideas and solutions in ePSM.

"At home in the ePSM universe"

Portraits of some of the terrific people in our Practice who are committed to helping clients create high-impact, win-win solutions at the frontiers of e-commerce.





E-PROCUREMENT: LEVERAGING PURCHASERS' NEW POWER

You may have seen the TV commercial that gets the point across in 30 seconds. The drama begins as a major global player in Japan suddenly loses an important supplier. How can it keep production from grinding to a halt? Then a white knight appears on the screen. It's the website of a tiny firm in the Black Forest. Sighs of relief in Osaka, beaming faces in Freiburg. It's a deal. Just another triumph in the brave new world of the Internet.

But buying and selling on the Internet is not just a copywriter's fantasy. Business-to-business or B2B e-commerce, in particular, is already big business and growing fast. Several independent studies predict that online B2B sales will top a trillion euros annually by 2003 – dwarfing the more highly publicized business-to-consumer or B2C e-commerce by a factor of ten.

And e-commerce is no one-way street. It's far more than just another marketing channel for selling finished products. Many companies are discovering the power that e-commerce techniques can put into their hands as *buyers* – be it of paper clips, a concept from an advertising agency, or the next shipment of crude oil. In fact, the electronic management of purchases throughout a supply chain is enabling companies to shift advantage from their vendors to themselves.

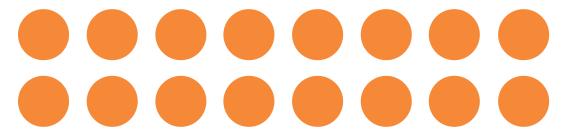


Glenn Ramsdell

Glenn Ramsdell is a Principal in McKinsey's San Francisco Office. He is a cofounder and leader of the Firm's Purchasing and Supply Management (PSM) Practice. He works with clients across a wide range of industries, including the electronics, consumer products, aerospace, and chemicals sectors. His recent focus has been to explore the impact of e-commerce on PSM ("ePSM"); specifically, how Internet-based tools give buyers the opportunity to reshape supply markets to their advantage. He has recently helped clients establish ePSM strategies and reduce total costs by optimizing their purchasing and supply management practices. Prior to joining McKinsey in 1991, Mr. Ramsdell was an associate at Allen & Company, Inc., a New York-based investment bank, and a client associate at Chase Manhattan Bank. Mr. Ramsdell earned his AB degree from Columbia University and his MBA from Harvard University.

The opportunity is huge, because every company buys goods and services – often to a greater degree than they realize. Depending on the industry, purchased goods and services – ranging from office furniture to raw materials to outside contractors – represent 30 to 80 percent of most companies' total spending. Moreover, that percentage is increasing because of the trend toward the outsourcing of both nonstrategic and core processes – ranging from payroll, call-center management, and credit collection to materials management and product assembly. Thus, effective purchasing and supply management (PSM) can yield substantial savings for any company, freeing resources for investment for future growth or for improved shareholder returns.

How can you best take advantage of the ePSM opportunity? First, by being aware of the new solutions and picking those most appropriate to your company's situation. And second, by revisiting your own business processes to realize the potential of even greater savings.







LEVERAGE THE NEW SOLUTIONS

The electronic environment offers a host of new opportunities that every company should be investigating. New platforms, software, and online capabilities are enabling many companies to get better prices, improve internal purchasing, and coordinate more smoothly with suppliers.

Get the Best Prices

Companies can leverage new platforms on the Internet that are creating more efficient marketplaces and allowing customers to dictate the prices. These marketmaking tools include exchanges, aggregators, shopping bots, and electronic marketplaces.

- Through online exchanges, companies can take bids from qualified suppliers in much the same way as they might in a traditional offline auction - but with the prices heading down instead of up. Among many other German companies Portum has developed software specifically to support such auctions.
- Aggregators play the role of brokers and offer potential customers opportunities to compare performance features and prices of similar items across brands and types. The aggregator hpi, for example, specializes in supplying companies in the chemical industry; IPS offers everything a company needs to keep its operations up and running.
- "Shopping bots" or automated shoppers are based on intelligent software designed to search online databases for low-priced offers for precisely specified commodity goods and services. CNET, for instance, has established itself as a shopping bot for PCs, peripheral equipment, and software.
- Electronic marketplaces bring buyers and sellers together: buyers post descriptions of the goods and services they're looking for; sellers announce what they have to offer. Examples of platforms like these include Cheops, a chemical-industry marketplace set up by the German conglomerate Metallgesellschaft, and mySAP.com, launched by the software smiths in Walldorf.

Improve Internal Purchasing Processes

Companies can automate many manual activities in purchasing – from defining specifications, forecasting

demand, and placing orders to remitting payments – by using integrated software solutions to reduce the indirect costs of the purchasing process as a whole.

A further option is to put online catalogs on the company

intranet and require employees to make their purchases of everything (from office supplies to PCs) from these catalogs. Online purchasing increases efficiency by virtually eliminating manual purchase orders. Also, it allows a company to realize economies of scale by funneling business to a few chief suppliers with whom it has negotiated volume-based discounts. Moreover, users like

Electronic commerce is far more than just another marketing channel for selling finished products.

The electronic management of purchases throughout the entire supply chain puts power into companies' hands as buyers of supplies, services, and raw materials.

these catalogs because they make it far easier to place orders, obtain approvals, and check on when the items will arrive. For standard and indirect material, good solutions are already well established. For customized and direct materials, the development race is in full swing.

Profit through Online Cooperation with Suppliers

Companies that have a good, cooperative relationship with suppliers can communicate quickly and easily using a restricted-access extranet. Such a link allows companies to take full advantage of the potential of online purchasing to reduce costs – for both buyers and suppliers – and thereby obtain more favorable prices.

- By accessing information on supplier inventory availability, purchasers can get faster turnaround on orders.
- By giving real-time feedback on supplier performance, buyers can expect to get quicker fixes to delivery and quality problems.
- By offering suppliers the carrot of reductions in their own costs, buyers can get more information about suppliers' operations e.g., inventory reach data and their performance capabilities, helping buyers identify further cost savings. By enabling these solutions, extranets quickly pay for themselves and benefit suppliers, too. Companies like DaimlerChrysler and Cisco have already set up supplier extranets and are reaping the first fruits. The number of errors in ordering and order processing is down, the speed of parts delivery up.





Make Incremental Changes Fast

Some ePSM techniques – especially for indirect materials that don't go into the product or service per se – are quick and inexpensive to implement. Easy steps that offer almost instant savings include joining an industry exchange, conducting Web-based auctions, and using corporate procurement cards. Such low-risk tools are often a good place for a company to start, especially to reduce overhead costs.

But the ePSM techniques offering the greatest returns and long-term savings such as online auctions for direct material and maintaining an extranet may require that a company face the strategic reconstruction of fundamental business processes – from product development to payments and new systems. Companies may even consider acting as aggregators and service providers for other businesses. Reaping these rewards takes more time, but can be well worth it.

USE THE ePSM OPPORTUNITY TO CONSIDER TRANSFORMATIONAL CHANGES

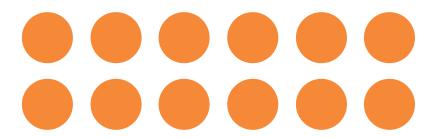
Transformational changes like those mentioned above require that a CEO works closely not only with the heads of purchasing and information technology, but also with product development and production to determine overall

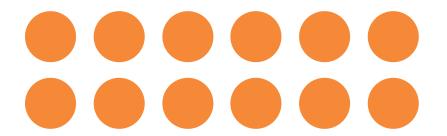
strategy as well as tactics. But the potential for value creation is significant, including opportunities for getting access to more vendors, making spot buys at lower prices, introducing just-in-time replenishment, and creating the capability for real-time design changes and suggestions for specifications.

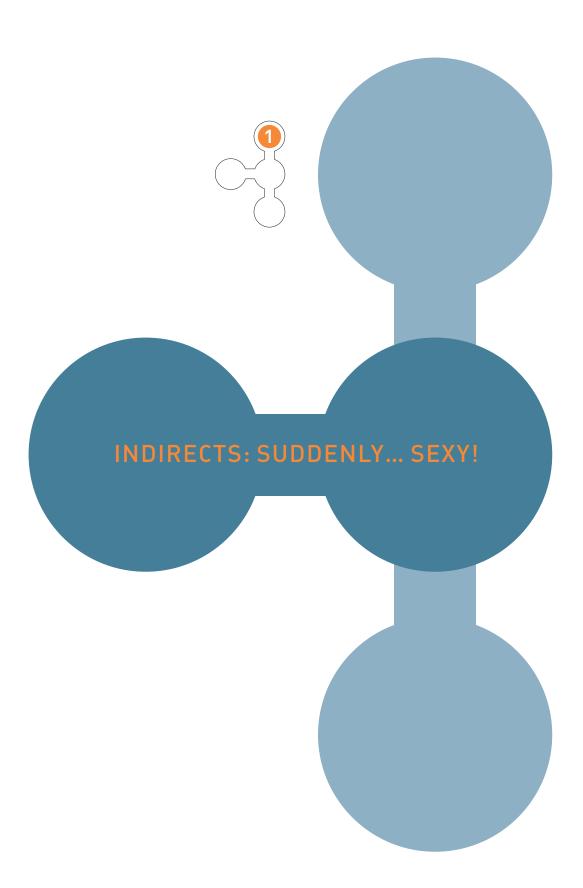
For the Biggest Impact, Go Back to Basics

Most importantly, thinking about ePSM is a forcing mechanism to encourage a company to go back to basics and make sure its purchasing approach and entire supply chain are set up right. This opens up the chance to evaluate whether a company's aspirations for its purchasing function are high enough, its purchasing staff talented enough, and its purchasing fact base accessible to the entire company (showing what is being purchased and with what specifications where and from whom at what price). All purchasing and sourcing should be carried out with a view to the total cost, not just the purchase price. This means that the purchasing organization should be involved in most areas of spending, in touch with all important users (from product development and sales to after-sales service), and have a supplier assessment program sufficient to spot glitches before they become serious problems.

One thing is clear: to seize these opportunities, it is important to move fast. Most suppliers and competitors are also looking for ways to use e-commerce tools to their own advantage. Thus, forward-looking companies need to set strategies and start deploying ePSM tools to ensure that advantage is shifted to them, instead of to the sellers. Günter Fuhry, Glenn Ramsdell







Paper clips, car rentals, janitorial services. Indirect spend categories are – well, a bit boring. Every company has them. They are generics. And, "You don't need to be a genius to buy pens and pencils." Until recently, the keys to success in purchasing indirect materials have been excellence in execution, efficiency in processing the countless requisition orders that roll in each day, and getting the best buy for each order in an efficient process.

The best buy can only be made, however, if your spend is fully bundled (one contract for all paper clips) and compliance enforced – which means policing every buyer in the worldwide organization to make sure they don't find and take a better local deal instead of sticking to the one global contract. And, if that isn't pleasant enough, achieving best practice also means "demand management" – communicating to staff that they should be sleeping in less expensive hotels, giving their miles back, turning out the lights at night...

But the very boringness of indirects is the key to their becoming the sexiest spend category on the block these days – because indirects are the first to "go ePSM." Indirects are the first category for which a significant offering is emerging on the Net. First, because they are highly universal and thus add up to a gigantic market. Second, because thereby companies can capture major process cost savings by letting end users order directly online from electronic catalogs, completely eliminating the need to process a requisition order. And third, because companies can realize significant purchasing spend savings – up to 10 percent – through more effective bundling of their spend, better compliance, reduced supplier processing costs that are passed along, and increased transparency – all of which leads to improved contract terms with suppliers.

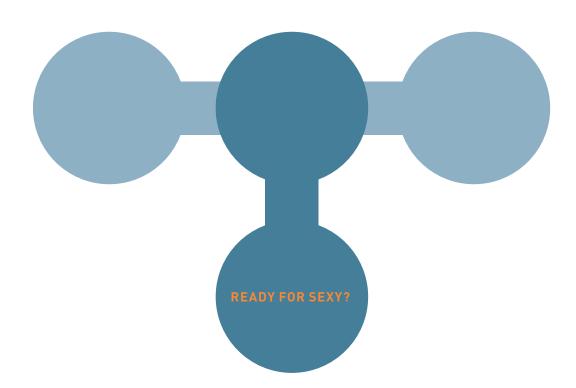


The First Movers in ePSM will Move in Indirects.

With that move, the role of Purchasing will change dramatically, from the "efficient processors" and "contract enforcers" to the "content providers" – those with responsibility not only for negotiating the very best contracts, but also for ensuring that such contracts are described and can be accessed online in an understandable, user-friendly fashion. Purchasing of indirect materials will involve less low-skill clerical work and more high-skill interpretive work – defining infrastructure for the Net and the content that goes into it.

Are You Ready for Sexy?

- Are you looking good? Have you done your supply management basics, identifying and bundling all common spend across locations for each relevant spend category? Is your spend "commoditized" to the extent this is possible? Have you worked with end users (e.g., the IT department or, in the case of spares, the Industrial Engineering departments at the local plant level) to maximize the use of standard solutions and minimize the number of suppliers? Have you installed effective demand management policies? For example, in travel guidelines, is use of preferred airlines and hotels strictly enforced? Or office supply and equipment policies? Do more than half of your expensive laptops never leave the office and can thus be replaced by cheaper desktops, as was the case for one of our clients? Putting suboptimal, poorly enforced contracts online will not make them good contracts.
- Are you fit and lean? Does your organization and those of your suppliers possess the right skills to
 develop and manage Internet content? Skilled strategic supply managers and IT architects are "in,"
 inflexible order processors (the majority of staff in many indirect materials purchasing organizations)
 are "out." For example, at one of our clients, more than half of the indirect purchasing staff consisted
 of "order takers," and, of those remaining, none possessed the skills required to develop and manage
 an online solution.
- Do you have the right accessories? Do you have the right Internet software that not only allows end users to order directly online but is also seamlessly integrated into your ERP systems and those of your suppliers? Mature commercial tools are now available, and those who develop their own solutions risk being punished with high maintenance costs and outdated technology later.
 If the answer to any of these questions is "no," then you should consider an appropriate "fitness program." Depending on where you stand, this might be a contracts optimization workout and purchasing spend diet, organizational liposuction combined with skill-building, or accessory (e-vendor) selection to make sure you are "ready for sexy."







The urge to auction is almost instinctual. Since time immemorial, animals and humans alike have engaged in auctions. Females of certain birds-of-paradise species regularly hold auctions to select a suitable male. The males simultaneously congregate in leks, calling hysterically and waving their magnificent plumage. Using such an auction, the females can avoid lengthy searches and ensure that they get the best partner. Our species also understands the inherent advantages of auctions. Ever since humans have gathered in marketplaces, auctions have not only ensured access to wider choice, but have also allowed market forces to determine the value of the object or idea to be procured.

The electronic platforms established toward the end of the last century - first and foremost the Internet - have dramatically expanded the potential size of the marketplace and freedom within markets. This sudden expansion has equally dramatic consequences for those who wish to leverage market forces. The growth of this medium has been explosive. While it took other means of communication and exchange – such as the telephone – nearly a quarter century to build a user community of 50 million, the Internet has achieved a comparable impact in less than half a decade. It is therefore easy to see that those market and PSM mechanisms that need high interconnectivity, such as auctions, will flourish on such fertile ground.

Companies such as eBay, Amazon.com, MetalSite, and Infospace have already successfully leveraged the auction capability of the Internet to expand their businesses. Each uses auctions to create closer bonds with customers (consumers will return to your site, if they got a good deal) and also as a means of purging inventory.

The Internet thus ups the ante on knowing how to auction, and there is a great deal buyers can learn from sellers, who traditionally have used auctioning more extensively. What follows are some of the ways that purchasing managers can think about leveraging the new capabilities offered by the Internet to buy smarter and better.

ALL AUCTIONS ARE NOT CREATED EQUAL: MATCH THE AUCTION TO THE PURCHASE

Fundamentally there is a relationship between what you buy and how you may want to buy it. The kind of auction you employ depends on the value you want to extract from your supplier, so you need to understand the different kinds of auctions and what they are best suited for.

There are two main types of auctions: physical auctions and idea auctions. In physical auctions, which are the traditional kinds of auctions, your main goal is to create competition on price, product performance, and suppliers' frontline execution, as is the case in logistics services, EDI, MRO services, integration of modules, and formulation. It should be no surprise that most Internet auctions fall into the physical auction category, since Internet auctions are well suited to standard items. Companies such as Paperexchange.com, Opensite, Priceline.com, JBA, TradeOut.com, Defense Automated Bidders Service, FairMarket, FreeMarkets, and many others have focused on business-to-business auctioning over the Internet. B2B auctioning is expected to be a multibillion dollar business within a few years.

In idea auctions, your main goal is to create competition on the quality of ideas and the strategic

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insight or foresight they provide for your company. This value is based less on price, and much more on the potential of the relationship to create value, as is the case with application development, specialized market information services, consultancy, or joint R&D. Companies such as DaimlerChrysler and yet2.com are now beginning to use the Internet for idea auctions, and we foresee that many companies with advanced purchasing capabilities will move into this arena. Given the different goals of each type of auction, we will discuss each in turn, focusing on a few things to think about to make the experience productive.

Cambridge, Mass. (January 6, 2000) – yet2.com today announced \$20 million in funding commitments from Venrock Associates, 3I Group, The Procter & Gamble Company (NYSE: PG), and Honeywell International (NYSE: HON), underscoring global support for the world's most comprehensive online marketplace for buying and selling intellectual property.

"The diverse pool and the significant

amounts of funding are indicative of a common theme: these companies are wholeheartedly embracing the collaborative exchange of intellectual property on the Internet, "said Chris De Bleser, chief executive officer of yet2.com. "We offer a global marketplace for companies, technology-rich institutions, and researchers, to examine, buy, and sell intellectual assets from among the world's leading corporations."





BUYER PREPARE: CHOOSE THE RIGHT FORM OF PHYSICAL AUCTION

Generally, there are two ways to participate in physical auctions: Either you participate in someone else's auction, or you create your own auction. You would participate in an existing auction when you are buying a standardized item and need to expose yourself to as many sellers as possible in order to get the lowest price. This auction type is used, for example, when buying basic raw materials, standard parts, consumables, consumer goods, etc., where it is important that the market be as transparent and liquid as possible (exchanges, online auctions/markets, etc.). You create your own, exclusive auction when you are a big buyer who can attract many suppliers because of the size of the transaction. In an exclusive auction, sellers will be willing to give you a lower price because the prices they give to you do not imply a price decline across the board. If you are not big enough to hold an exclusive auction, you can still augment your purchasing power by participating in a buying consortium.

If you are holding a lot of exclusive auctions, you certainly want to build the capability to be good at it. Regardless of whether you are creating your own auctions or participating in the auctions of

yet2.com serves as an online trading floor where scientists and engineers can meet to exchange and explore technology quickly, easily, and efficiently. Many of the world's leading research and development corporations, including 3M, Boeing, Dow, DuPont, Ford, Honeywell, Polaroid, Philips, and Procter & Gamble, are among those providing technologies and intellectual property to yet2.com. The technology available on yet2.com will continue to expand exponentially with the addition of US- and foreign-based companies, government agencies, and institutions.

others, there are a number of different auction types, and you need to know which auction type best suits your goals as a buyer.

The primary goal of an auction is to achieve the highest value for the price of the good you are purchasing. Auctions accomplish this by increasing competition between suppliers and putting you in the driver's seat by enabling you to control the bidding process.



Learn From Sellers

Although selling auctions have explored more of the territory of possible designs, the same opportunities present themselves for buying auctions. Selling auctions range from Sotheby's in London ("English" ascending-bid) to flowers in Amsterdam ("Dutch" descending-bid), to PCS services in the US (first-price sealed) to oil drilling rights in the Caspian sea (e.g., second-price sealed). It would take volumes to describe all the variations, so here are two examples of how buyers can learn from sellers.

The "second-price" auction is a very powerful method that is largely neglected in the buying community. Here the supplier with the lowest bid is assured the second-lowest price. The dynamics of such an auction always lead the supplier to bid at the lowest possible level, given the incrementally higher deal that he is going to make. Another form of auction that creates strong competition on price is real-time auctioning with anonymous suppliers, which fosters the same "fever" of a live auction house. This "fever" is created by the fact that competitors cannot completely analyze each other's behavior and by the pressure to make real-time decisions, often leading to strong bidding activity during closing time.

So, how should you go about deciding which of the many different kinds of auctions to use? The best way is to fully understand the motivation of the suppliers and the degree of risk they are willing to accept, and match the auction design to your suppliers' profile (or change that profile).



Beware the Winner's Curse

In considering your suppliers' motivations, one of the variables you will have to grapple with is the degree of transparency you want to achieve – that is, to what degree you want the bidders to know about each other and each other's bids. Greater transparency generally favors the supplier, because it protects him against unnecessarily bidding way under another bid. Less transparency can benefit the buyer, but it can also create a "winner's curse," wherein the winner feels (and rightly so!) that he bid far lower than what would have been necessary. If you as a buyer are making a one-time, arm's-length purchase, you shouldn't care whether your supplier feels the "winner's curse." However, if you are trying to establish a deeper or longer-term relationship with your supplier, the "winner's curse" will rebound against you in some way, either in this deal or the next one.

Another form of this "curse" derives from suppliers' uncertainty about their own cost projections, for example, in large turn-key construction projects where they may be depending on subcontractors. You should therefore take suppliers' risk aversion into account, as this will typically cause them to mark up their bid. To reduce this mark-up, buyers should create higher transparency in the bidding process (multiple first-price bidding rounds, full disclosure of bids after each round, online system, etc.) or reduce the risk of the bid, for example, by parceling the job into smaller pieces. This means the seller incurs less risk and will reduce the mark-up.

Knowing the motivations of your potential suppliers, as well as your own goals, will enable you to design your auctions appropriately. In addition, you need to devote some thought to how to carry out these auctions. It is critical to create trust in the auction procedure if you plan to hold an auction more than once. One way to do so is to involve a neutral third party.

Last but not least, building routine auctioning capability, especially when Web or extranet enabled, will create a community of auctioning aficionados within your company. You may even discover that this community evolves into its own business!

PROCURE INNOVATION THROUGH IDEA AUCTIONS

An area that has received little attention in the buying community until recently is idea auctions. In situations where the value delivered by your supplier is in creating strategic insight, foresight, or innovation for your business, idea auctions can be very beneficial. Here you ask suppliers to compete to deliver the best ideas and solutions. This gives you access to a larger and richer pool of ideas and talent.

Idea auctions can range from simply buying one idea to solve a simple problem, to mixing and matching the best idea elements from different suppliers to create an innovative solution to a

complex problem. Examples of the former can be found on Internet sites that specialize in matching the supply and demand of ideas. yet2.com, which was officially launched at the beginning of the year, is one of these sites. It is primarily a technology trading floor, but technology buyers can also create "technology wanted" listings to actively solicit ideas. Patentexchange targets the virtually unexplored intellectual property market. The focus of these and other new companies is on creating a market for the exchange and auctioning of ideas, patents, or technological solutions.

Sophisticated Buyers Are Using Idea Auctions

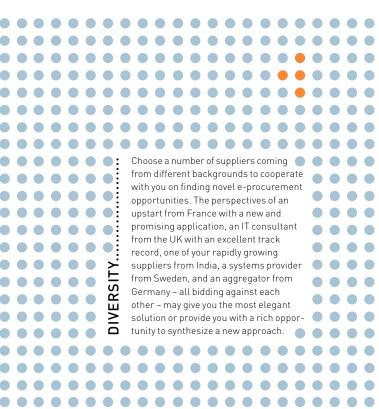
Some major automotive manufacturers and new players like yet2.com go one step further. They share technical advances proposed by potential new suppliers with their strategic supplier base to see if their core suppliers can match the proposed innovations. Only if current suppliers cannot match the proposals, will a new supplier win the business. This way, only the best and most innova-

tive new suppliers triumph in the idea auction. A variant of this approach are the Websites some companies have established as a venue where current and potential suppliers may offer new ideas. Going even further, a number of companies are creating more complex idea auctions that allow them to pick and choose the best idea elements from different suppliers to craft a superior solution to a major

Building routine auctioning capability, especially when Web or extranet enabled, will create a community of auction aficionados within your company. The result: lower purchasing prices and maybe even a new line of business.

challenge. An example of a project where this has been applied is a large capital project implementation, where suppliers are asked to bid not only on price, but also on the superior technical solution and additional competitive advantages created for the buying company. Here the customer has the option to mix and match the best ideas from round one to create a new design, and then ask each supplier going into a second round to bid on the new design. This technique has also been used by pharmaceutical companies to select R&D services.

As IT buyers become more sophisticated in procuring IT solutions, idea auctions will dominate because writing the software will become less important than generating ideas that create new capabilities and new business opportunities. \bigcirc



PREPARATION IS THE KEY TO SUCCESS

Just as with physical auctions, the key factors for success in running idea auctions lie in understanding your goals and the goals of your suppliers, ensuring fairness, and creating the appropriate degree of transparency. As a first step, you need to clarify what insights, foresights, or new business opportunities you are seeking through the auction. Secondly, you need to understand suppliers' aspirations, and what value they place on a potential relationship. Thirdly, you need to determine the appropriate auction format.

In the realm of intellectual property, it is even more important for you to ensure that your suppliers see their ideas treated with respect and fairness.

Another difference between idea auctions and physical auctions is that,

in physical auctions, you typically gain advantage by seeking to attract a large number of suppliers. In idea auctions, it is more important to seek a diversity of suppliers to make sure that you get exposed to a number of different perspectives. For example, you may choose a number of suppliers coming from different backgrounds to cooperate with you on finding novel e-procurement opportunities. The perspectives of an upstart from France with a new and promising application, an IT consultant from the UK with an excellent track record, one of your rapidly growing suppliers from India, a systems provider from Sweden, and an aggregator from Germany – all bidding against each other – may give you the most elegant solution or provide you with a rich opportunity to synthesize a new approach.

Holding such an auction can be as simple as creating the capability on your Internet site, participating in current markets, or creating your own market-specific platform.

As the number of interconnections between companies and markets increases, and the cost of interaction decreases due to confluence of languages and e-enabled platforms and tools, the size and opportunities of future marketplaces will expand. Given the growth of B2B online commerce and the expectation that this market will exceed the US\$ 1 trillion mark sometime in the next few years, auctions and the possibilities they offer will certainly present an attractive source of value and ideas for those who apply them creatively.



SECOND MOUSE OR EARLY BIRD? DECIDE HOW TO PUT YOUR AUCTIONS INTO ACTION

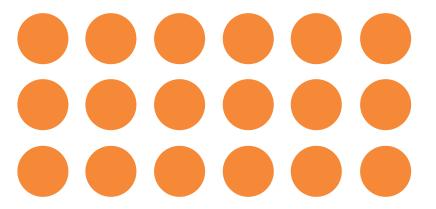
The story on taking action on auctions is simple. In addition to trying various kinds of auctions, you should decide whether to build auctioning as a distinctive capability within your company. There is probably a "second-mousegets-the-cheese" advantage for those who want simply to participate in broad online markets and conduct auctions sporadically offline. Most consumers, for example, will fall into this category, as they have better things to do than becoming auctioning experts.

If a significant portion of your spend is eligible for exclusive auctioning or the world of idea markets and auctions excites you, or you are thinking about kick-starting new business opportunities, there is an "early-bird-gets-theworm" advantage, especially when leveraging e-procurement.

Creating a new business around auctioning requires you to ride the learning curve and quickly develop the appropriate technology platform. Piloting different kinds of auctions allows you to select the technology that is most in line with the capabilities you want to develop and your company's strategic challenges. Creating early platforms also helps you capture good ideas and value more regularly for your business, find the right partners before others do, and tie promising or successful suppliers to your exclusive network.

In our experience, piloting most auctioning techniques is fun, valuable, and easy to do. To get started in building a platform or even a new business, you should decide soon and move quickly. In the new economy the early bird needs to be very early.

Khosro Ezaz-Nikpay



E-PDP: THE SHAPE OF THINGS TO COME IN PURCHASING DIRECT MATERIALS



2002.02.04: It's Monday morning. Jan Miller flips on his computer and reviews the latest product design ideas for car seats that came in over the weekend. Skimming through more than twenty ideas from design and engineering companies from all over the world, the purchasing manager for seats at Aircars International quickly identifies the most promising concepts. He initiates an Internet video conference with Sandy Lem at SuppleSeating, the seat maker, and Mar Rudbek in product development to talk over the feasibility and cost reduction potential of the six designs he's selected. The "Supervario" offers the most advanced adjusting system, but the D-zine "Zephyr" achieves nearly the same convenience with a simpler solution and has a much sleeker look.

Four weeks later, Dee Solo, lead designer at Dublin-based D-zines.com pumps his fist in the air in triumph when his PDA announces the fifty thousand dollar bonus from Aircars – 20 percent of the savings potential of his design team's winning solution.

NO FAIRY TALE

What may sound like a far-off product-design-and-purchasing fairy tale is the logical next step for customized components and subassemblies – referred to as "direct materials" because they are an integral part of the final product.

In one to two years, electronically networked product design and purchasing or "ePDP" will be a reality. The two assembly heavy-weights Ford and GM announced already at the end of 1999 that one main focus of their joint venture in electronic purchasing will be direct material and design work. The group they and DaimlerChrysler have assembled to create the Covisint exchange is well positioned to put the commercialization of integrated product development and purchasing tools on the fast track, especially as Delphi, the world's largest automotive components supplier, has also signed up.

Investment in this field has the potential to be richly rewarding. While the news today is full of reports on online catalogs, exchanges, and auctions, these tools cover mainly standardized parts and material – just the tip of the purchasing iceberg. Even with increasing standardization, around 85 percent of all industry purchasing spend is for customized items.

What Counts is Better Product Design

Unlike standard items, the critical success factors for improving customized direct material purchasing are not slashing transaction cost or boosting efficiency, the strengths of the current generation of e-procurement tools.

For direct material, what counts is better product design. In our experience in assisting clients with innovation and knowledge management, getting consistently superior design results boils down to two factors: superior cross-functional teamwork and superior supplier integration.

The power of these two improvement levers can be amplified by e-tools that build on the speed, scope, and transparency afforded by the Internet. As the technical possibilities for sharing design ideas across electronic networks improve, a company can expand its design "solution space" – for example, the range of technologies it considers. It can intensify "stimulation density" – the quantity and tempo of ideas for enhancing the value of the design. And it can continue to tap the resources of the world's best design and engineering firms for new and improved product ideas during series production.



Tools for e-procurement marketing improve the buyer's approach by converting it from "pull" to "push." For instance, by posting "designs wanted" on its supplier extranet, a buyer gives prospective suppliers a full briefing about future requirements. If the assignment looks interesting, the supplier can apply for consideration by completing a standard supplier profile. The buyer gradually gains a database of potential supplier profiles that is global in scope, always up-to-date, and equally accessible to all members of the buyer's cross-functional PDP teams.

THE SHAPE OF THINGS TO COME

More specialized ePDP tools are evolving from today's toolkit for exchanging knowledge and enhancing supplier management. They give buyers a bigger edge in terms of information and bargaining power when suppliers agree to work at the new e-enabled level of openness with the buyer's cross-functional team (product development, purchasing, and production experts). Tools for improving direct materials purchasing are emerging for the following applications.

E-Concept Competitions Generate a Richer Range of Ideas

E-concept competitions can help buyers elicit pure ideas from many suppliers, initially free from any cost considerations. This ensures that unconventional, but potentially powerful solutions are not prematurely excluded. All contestants first submit their offers - for a radio, for example - electronically as CATIA drawings and thus contribute to concept development by the buyer's cross-functional team. On the basis of the concepts developed, the cross-functional team selects three to five core suppliers for joint development work. Besides potentially expanding the buyer's design horizons, the initial general concept competition reduces the total number of supplier workshops needed and helps make the (still necessary) workshops more focused.

E-Linear Performance Pricing Sharpens Product Value Definition

The e-extension of the classic Linear Performance Pricing methodology – eLLP – provides a real-time visualization of product benefits and purchasing price trade-offs or targets, which supports the buyer's team in jointly developing superior design solutions with the three to five short-listed core suppliers.

- Product benefits are jointly defined by combining the suppliers' and buyer's knowledge of the market (specs, customer requirements, etc.). The importance of individual features and attributes is objectively quantified and weighted, yielding a total benefit "score" for the different design solutions.
- Competing online, each supplier enters its offer into the two-dimensional price-benefit eLPP grid, and backs its positioning by sending the buyer a CATIA drawing as proof of the validity of its offer. All points in the grid are visible, but anonymous, for the other suppliers. Visualization of the challenge creates a strong competitive incentive, and after the eLPP session, the CATIA file and cost data remain available to the buyer for feasibility checks until the design freeze and final decision.
- Final supplier selection can be tied to a final auctioning day. For specified materials, it is not possible or desirable to skip the concept development stage. But, after having cycled through these steps, the buyer's team may be able to knock down the price in an auction before awarding a guaranteed manufactur-ing contract.

10RE eTOOLS

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Tools for e-share bidding by suppliers with guaranteed, often multi-year contracts for the same parts, but without pre-defined volumes, use the yield management approach – purchasing the same item at different prices - to improve supplier management. Buyers can reduce their supplier base without risking over-dependency on a particular supplier; they can reduce some of the year-end negotiating work; and they can obtain better purchasing prices. For instance, a 20 percent share of the total contract might be bid down to a purchase price of \$30, a 40 percent share to \$28.





E-Linear Performance Pricing² (eLPP2) Captures Advantages Further Up the Supply Chain

Our eLLP2 concept aims at increasing the positive impact of the above tools exponentially by extending their use into the series production phase. Here they help to manage and support the generation of new product ideas by design companies and tier 2 suppliers. The OEM buyer and final supplier validate the product ideas, implement winning solutions, and reward the relevant design company or tier 2 supplier with a percentage of the cost savings. In this way, eLLP² extends the buyer's influence over supplier performance further up the supply chain while leveraging "idea generators" via the Internet.

E-PDP tools are being developed for every phase of the order fulfillment process: 1) concept design,

- 2) product development and 3) production,
- 4) supply chain management. Here's a brief line-up of some attract a larger pool of of the fundamental ePDP tools that should be on your agenda:

Procurement marketing and concept competitions

In the concept development ment marketing to the global phases, core suppliers work supplier community and for collaboratively with online concept competitions suppliers and allow efficient Cost tools to find the most configuration emerges, the initial group of bidders is narrowed down to "core

■ E-Linear Performance Pricing ■ E-LLP² for series production and Design-to-Cost

In the specification, product e-versions of Linear Performance Pricing and Design-topreselection. As the product attractive trade-offs between design features and competitive cost levels. From the core suppliers, the buyer selects one
 buyers can obtain better specified solution.

and supplier management

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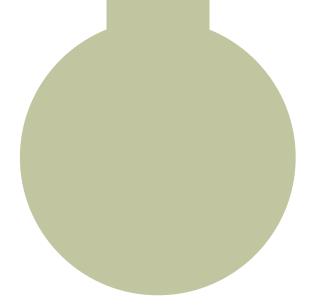
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The buyer supports and manphase, e-tools for procuredevelopment, and preproduction
ages final suppliers with tools such as eLPP², which extends the e-marketing, e-concept competitions, and eLPP to tier 2 suppliers and design companies. Through e-share bidding by suppliers of identical parts with guaranteed contracts, but without guaranteed volumes, or two "final suppliers" for the purchasing prices, for instance, a 20 percent share of the total contract might be bid down to a purchase price of \$30, a 40 percent share to \$28



BACK TO THE FUTURE

2007.02.05: It's high noon at AirDZine, the dynamic upstart resulting from an ePDP team spin-off-and-merger with several of Aircars' strategic design suppliers. Jan Miller, now head of AirDZine Product Development, feels his chest pocket vibrating: It's time to submit his group's solution for 175 clubcar interiors in the 12:00-12:15 p.m. eLLP bidding slot set by Vroomer Industries. "Five years ago," he thinks as he clicks through to the bid launch pad, "it took months just to get the seats right. Now it's just a couple of weeks for the whole interior. Looks like I'm designing my way toward a seat on the co-development board at Vroomer." Peter Breuer, Elmar Kades



CREATING AN ENTREPRENEURIAL PROCUREMENT ORGANIZATION

hpi is an independent procurement company serving a range of customers primarily in process industries. Since its formation as a separate corporate entity in 1998, hpi has achieved tremendous savings impact and entrepreneurial spirit. Khosro Ezaz-Nikpay asked Michael Freienstein, hpi's CEO, to share his insights about what has made hpi so effective, and what other purchasing organizations can learn from hpi's experience.

What are your current priorities? :Q

TODAY'S STRATEGY AND SERVICES

● ● ● ● ● ● ● The key to delivering effective strategic procurement services is a stable and growing :A customer base. Acquiring new customers will also benefit our current ones, since we will be able to offer them better prices due to increased volume. Furthermore, we are evalu-THE BEGINNINGS: FORMING AN ENTREPRENEURIAL ORGANIZATION ating a number of alliances to expand our global reach. This includes talking to other Q: How did you begin your transformation to an aggregators and consulting firms. Last but certainly not least, we are focusing some of ● ● ● ● ● ● our best resources on developing new products, especially ones that are Web-enabled. entrepreneurial purchasing organization? What is your fundamental value proposi- :Q overall purchasing capability of the Hoechst group. We split strategic from operational purchasing 🔘 🔘 🔵 tion and what services do you offer today? and created a centralized strategic purchasing network. We then proceeded to install a procure-First, providing our customers with the full purchasing power of the hpi network. Offering :A ment enhancement program to dramatically reduce our spend base and the total cost of ownership. the procurement organizations of our customers the ability to buy via the hpi consortium Q: What were the initial results? helps them free their resources to pursue additional opportunities to reduce total cost A: We set a target to save at least 5 percent on our total spend volume, and, a year later, of ownership. Also, participating in this network does not restrict their options to influence we had already achieved over 8 percent on the spend investigated. This gave the newly specifications or the way they prefer to develop their suppliers. It simply gives them formed group a real boost of confidence and a high profile within the organization. Q: How did you decide to cre-Second, having been through a total cost of ownership proate a separate organization? gram ourselves, we also offer our customers project coaching A: When Hoechst split itself into a life sciences group and a chemicals group, we faced a critical question:

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- business take part of it, or try to preserve and further enhance the purchasing group's spirit? We decided 💮 💮 💮 💮 💮 💮 💮 💮 💮 to do the latter. We formed hpi as an independent legal entity two years ago and never looked back.
- Q: How did the company respond? A: By and large, the reaction was positive. Some Hoechst businesses left the
- network after significant changes in their holding structure. After being O O O O O O O O O O O sold, they needed time to recrient themselves in their new environment. It became clear that we had to develop a customer-oriented mentality.
- Q: What were other key moments in the development of hpi?
- A: Our first strategy session that was a key moment. After two days of intensive discussions and soul-searching, we had defined key initiatives we needed to pursue, such as a business plan, key accounts and marketing plans, product development plans, and data warehousing. It was critical 💮 🔘 🔘 🔘 🔘 🔘 for the leadership group of hpi to get together and for all of us to pull in the same direction.
- Q: How did you determine your strategy?
- A: The theme of our strategy sessions was to develop the mindset of an "upstart" company. We asked ourselves: What would a venture capitalist look for if he wanted to invest in us? How do we want our current and future customers to perceive us, and how far away are we from that goal? What new capabilities do we need, and how do we acquire them quickly? We ended up focusing on three strategic business
- Yes, they can, and it works to everyone's advantage. For example, some of our new customers are :A choosing to implement our data warehouse, but want to study our capabilities further before entering the network. As they gain confidence in our capabilities, they tend to involve us in other discussions and pilot some of their spend to test the advantages of using our tools and bundling power more broadly. This process is sometimes slow, but has the advantage of creating trust in the relationship and our professional qualities. It also allows us to tailor our services to the specific needs of our customers.

● ● ● ● ● ● ● ● tool, which monitors the effectiveness of strategic sourcing activities.

managers in their decision-making and fact-finding endeavors. Among them

our supplier evaluation program, and our procurement performance tracking

In addition to customer focus, how are you :Q trying to create competitive advantage?

Can your customers choose from the variety of :Q

products you offer, and how does that work out?

We realized that the "game" within this industry will change. Certainly success in this business is closely :A linked to size - in other words, economies of scale, market share, and so forth. But other factors are becoming important – such as technological breakthroughs and understanding how customer needs change with time. E-procurement used to be something the tech buyers talked about in the hallways – today it is a necessary part of doing business. Therefore, the optimum combination of guessing our customers' future areas: strategic sourcing, information management, and procurement consulting.



PLANNING FOR THE FUTURE

Q: What's next? An IPO?

A: My management team has set its sights on high aspirations (laughs). We will take it one step at a time. Our primary goal is to grow vigorously over the next year. In particular, we plan on expanding our industry scope to include new sectors such as steel and banking, or a variety of smaller companies. To boost 0 0 0 0 0 0 0 this path. Today we have a committed group of people with a broad range of this growth we will cooperate with other aggregators, consulting firms, and platform providers. improve the level of service and expertise our customers have come to expect. To this end, we have significantly increased the training of our staff, and we are actively looking for new resources with an expanded skill set and entrepreneurial fervor to catapult us forward. I dream 💮 💮 💮 💮 Basically, all the key elements that have made us more entrepreneurial would also benefit a strate- :A

Q: How do you keep pace with customers' needs?

A: We have installed a formal appraisal system for our services. Our customers give us feedback on our services our customers give us feedback on our services. In sum,

Q: What technological ideas or platforms will you invest in?

A: Systems that will optimize the entire supply chain and platforms that enable companies to better leverage and interact with their strategic suppliers. We have created a first step in this regard with ASAP, our supplier evaluation tool. We also have a data data at our fingertips, track our purchasing performance, and create reports for our customers. We are also developing other, more sophisticated and Web-enabled tools. At least in Europe, most of our customers still shy away from going online to the full extent possible – they are more interested in creating extranets and do not yet fully leverage the Internet platforms that are available. But I believe this will change dramatically over the next few years. I encourage my colleagues to evaluate and explore as much as possible the rapidly evolving opportunities. We expect to see advances in customized search engines for identifying new supply or innovation from suppliers, better market knowledge, and more sophisticated transaction

and trading instruments. We see ourselves as a technology scout for our customers. We test it out for them, and they can enjoy the truffles we find.

Michael Freienstein

Michael Freienstein (49) has been Managing Director of hpi Hoechst Procurement International GmbH since September 1998. He started his business career in the Raw Materials Purchasing Department of the Hoechst Group in 1975 where he spent most of his professional life, entrusted with different functions and responsibilities. In 1980 he was seconded to Hoechst Australia for two years followed by a second secondment to France in 1985. From 1988 to 1993, Mr. Freienstein was head of the Inorganic Chemicals Purchasing group. He then left the central procurement division to become VP Marketing & Sales with Kalle Nalo, Wiesbaden, a Hoechst-affiliated company producing coatings for different applications. In 1996, he was appointed as head of Raw Materials Purchasing within the meanwhile reorganized Service Center Materials Management, which, due to the restructuring of the Hoechst Group, became in 1998 Hoechst Procurement International. Michael Freienstein is married and has two children age 18 and 16.

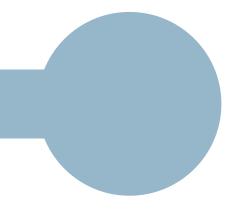


KEY INGREDIENTS OF SUCCESS

- How important is it to be an :Q independent organization?
- - How can procurement organizations that do not plan :Q to create their own company emulate your success?
- of the day when hpi will be a talent pool for the businesses that participate in its network. program with high aspirations, creating key capabilities that are important to a company's future, • • • installing a reporting system that is customer-specific. (By customer, I mean the various business a number of dimensions, and we can track our progress toward ever higher satisfaction levels. We also try to keep abreast of all technological innovations and new purchasing tools and concepts by keeping in close contact with academic institutions and by making benchmarking visits. procurement organizations showed that most, if not all, of these elements are present, and that • • • when you walk down the halls of such an organization, you can see the excitement in people's faces.
 - Mr. Freienstein, we certainly have seen this spirit within your :A team. Thank you for sharing your experiences with us.

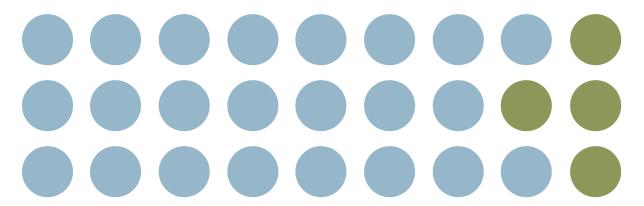


CRACKING THE E-VOLUTIONARY CODE



The hype is over; the challenges remain. While some of the early e-business pioneers are experiencing painful revaluations by the stock market, the plans and progress of established players (e.g., BP Amoco, General Electric, and Procter & Gamble) in taking their purchasing 100 percent online reflect a new sobriety and seriousness about capturing the value of doing business electronically. The "critical mass" of users in B2B has been reached in the US. The UK, Canada, and Germany are not far behind. Technologically, broadband is around the corner, speech recognition software is on the verge of throwing the Internet wide open, and more innovations are on the way.

In a rapidly changing environment, companies must actively evolve; those who best adapt to the new environment will be the ones to thrive. As in nature, there must be trial and error, but in the words of Charles Darwin: "It is not the strongest of the species that survive, nor the most intelligent, but the most responsive to change."



A MAP FOR THE JOURNEY

To crack the evolutionary code and increase your responsiveness, we suggest embarking on a journey to observe and classify the PSM attributes of your own company and the other "species" in your competitive habitat. As you proceed, use pilot projects to test your hypotheses about successful adaptation in the new economy. The map for this journey has not been fully charted, but a handful of coordinates to steer by are clear. As we see it, the new world of ePSM consists of three basins or arenas, aligned with the business system:

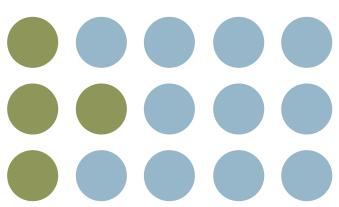
- Arena 1: product development and purchasing of direct customized materials
- Arena 2: purchasing of indirect standardized materials
- Arena 3: supplier/supply chain management and production planning
 At present, discovery and exploration are focused mainly on arena 2, the purchasing of indirect materials. With the
 rapid progress being made here, it is essential to anticipate the next generation on the horizon of applications
 for improving the procurement of direct materials, setting the stage for the integration of purchasing with product
 development as well as the development of true "end-to-end" supply chain management solutions. (If you
 have not yet classified your purchasing into standardized and customized materials, that is the first step.)

EXPLORING THE CURRENT GENERATION OF TRANSACTION-ORIENTED E-APPLICATIONS

To start with, go for the tools designed to support online purchasing of commodity-like materials such as online exchanges, aggregators, and agents or "bots" that can search the Internet for specified standard items.

For closer supplier relationships, set up a supplier extranet that provides a variety of tools for effective supplier interaction and management online, ranging from supplier evaluation scorecards to new supplier benefit programs. In both cases, take the "do it, try it, fix it" approach, actively gathering suggestions from key suppliers and experts. (Our e-business "accelerator" offers a range of support in setting up solutions with top vendors; see "Acclerating E-Business Building @McKinsey.") Using these tools is a "no regrets" move for any company. They ensure maximum market transparency, minimize transaction costs, and free up buyers' time to concentrate on strategic purchasing of direct materials. \bigcirc





TIPS FOR SUPPLIER MANAGEMENT

With core suppliers, it will be valuable to work out joint strategies, also as part of building a network of alliances. Points to keep in mind:

- Explore ways that suppliers can also gain advantage online. For the high-performing regional supplier, for example, the opportunities to leverage B2B e-commerce in pursuit of global growth could be significant. Suppliers can leverage trade exchanges, for example, to improve target costing, benchmarking, and many other critical processes as well.
- Develop an up-to-date activity-based cost accounting system for internal and supply chain cost transparency. Many companies find they and/or their suppliers are ill-prepared to engage in online formats such as auctions because their accounting and other systems do not accurately reflect the true costs of doing business and cannot respond quickly enough to changes requested.
- Maintain active safeguards to ensure no confidential or proprietary data "leaks" out across the system, providing competitors with more information than they should have.
- Consider investing in third-party online purchasing tools. Such investments enable you not only to share in the potentially huge value these ventures can generate but also to understand the underlying dynamics of buying and selling online more fully, and to gain a say in the ground rules of the exchange.

The buyers and suppliers capable of using today's tools to capture the maximum amount of value available to them will have an excellent basis for using the next generation of ePSM tools to their advantage.

ANTICIPATING NEXT-GENERATION E-APPLICATIONS

The next generation will bring more sophisticated and, typically, cross-functional and inter-company e-applications. The most exciting prospect, of course, is putting purchasing of direct materials (like car seats) online, in other words, creating a seamless interface between classic procurement and product development. (See also "E-PDP: The Shape of Things to Come in Direct Materials Purchasing")

These tools will allow companies to tap the worldwide marketplace for ideas by making it far easier to obtain and compare proposals without compromising suppliers' confidentiality, thus supporting better idea generation and even stronger supplier integration and development.

Achieving such solutions implies working with suppliers and IT vendors in a network of strategic alliances. For one thing, it will be essential to understand and shape procurement and development processes – and this can only be done in the early stages. And to start coming up with a superior innovation in a core process that captures enough cost and time savings to catch up with or even overtake today's leaders requires a diversity of skills and experience that few companies can muster purely in-house. 🕒

You need them, but don't expect them to be the end of the journey. Today's common e-procurement tools are auctions, exchanges, aggregators, and catalogs. They provide increased transparency and efficiency. Online Auctions are carried out via Internet. Auctions work well for near-commodity items. The buyer announces the auction, suppliers dial in and bid (in reverse, quoting lower and lower prices). Each supplier can see the competitors' bids on screen and bid again. Exchanges are a tool for online market making that match buy and sell orders between multiple buyers and sup-

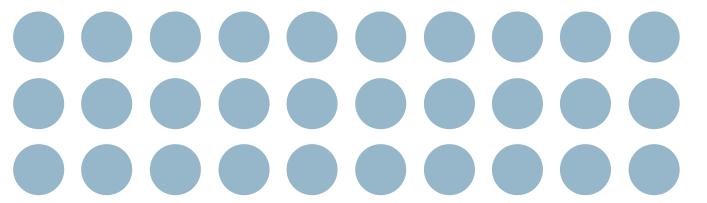
pliers. They are used for commodity-type products with standard specifications, e.g., steel, chemicals, and for products that are highly temporal in nature, e.g., electricity. Exchanges typically result in savings of 5 to 10 percent from more transparent demand and supply, reduced inventory costs, and shorter lead times for sourcing. Aggregators create vertical or horizontal markets by aggregating a number of suppliers. They help to purchase product categories with many stockkeeping units (SKUs) and excessive cost/time associated with searching individual catalogs, e.g., chemical additives, lab reagents. Aggregators help to save up to 10 percent of current process times through quicker searches; new, lower-cost suppliers; and ease of price comparisons. In addition, they lower transaction costs by 20 to 40 percent by reducing purchasing orders and invoices. 0 0 Catalogs are an order-to-payment automation tool; browser-based electronic catalogs are available com-

plete with approval rules. Catalogs target indirect items with high transaction costs, e.g., supplier selection, item search, purchase order generation and approval, and items with low compliance and high maverick buying. Catalogs help to save up to 10 percent via reduced maverick purchasing, reduced transaction costs, and



A key challenge in evolution is coming up with a strategy to manage e-solution providers. This is a prerequisite for successful evolution as no e-provider clearly leads the field with attractive tools in the current generation and a credible pipeline of tools for the next generation.

For example, the acknowledged masters of linking ERP systems with the Internet are SAP, Oracle, and J.D. Edwards. Clear leaders in tools for purchasing commodity materials and for creating marketplaces are Ariba, CommerceOne, and Oracle. J.D. Edwards and SAP are strong followers. Then there's FreeMarkets Inc., a specialist in enabling auctions for semi-specified industrial goods. So far, Parametric Technology Inc. is the only player to offer Internet-ready tools for collaborative product development, while J.D. Edwards, i2, and Manugistics have made a name for themselves as leaders in forging linkages between production, production planning, and logistics. Given this fragmented landscape, it's likely that different e-providers will be needed to achieve the best overall solution – which must also take next-generation developments and changes in the competitive landscape into account. The broad questions to consider include the following:



How much value can each of today's tools add in your specific purchasing environment?

The main performance levers in procuring commodity-like materials and linking customer demand with suppliers' production planning are, of course, transparency and efficiency. Companies have to assess the true value-added impact of the tools now on the market on their PSM processes and consider outsourcing a larger share of the purchasing and supply of indirect materials.

What are your competitors and suppliers up to?

As e-tools are ushering in an era of closer integration between companies, it will be essential not to get locked out of key alliances; indeed, in most cases, it will be essential to play a shaping role to extract the most value. This makes "competitor intelligence" more important than ever - and it must extend to suppliers and e-providers as well.

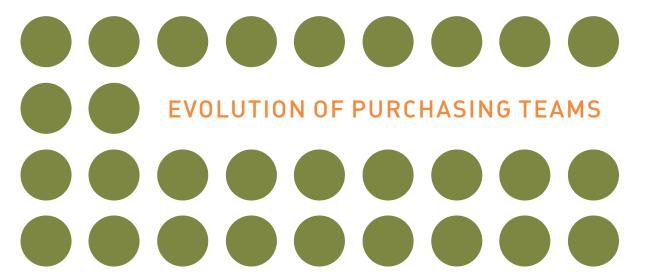
What steps can you take towards developing new e-applications?

The biggest future challenge is to design an e-procurement solution for direct material. In the automotive industry for example, purchasing of direct material currently accounts for over 80 percent of the auto makers' total purchasing spend. The majority of cost savings in purchasing direct material is generated through better ideas developed by cross-functional teams and suppliers well integrated with the buyer. Today's supplier extranets are thus only the beginning. But they are an essential foundation for developing cross-functional teamwork, forming virtual communities, and cooperating more closely with suppliers in a network of strategic alliances.

As always with supplier management, even when the lead e-provider who serves as "development supplier" for a selected material/material group produces a good solution, it is advisable to conduct discussion rounds with the other relevant e-providers in order to confirm and improve the evolution strategies proposed. In other cases, alternatives should be evaluated to provide a fall-back position and bargaining clout. The final choice of partners is sealed with a contract covering partnerships, exclusivity, confidentiality and transaction fee arrangements, sharing of investments and revenues, as well as agreement on cost reduction over time, deliverables, and payment.

The prospects for ePSM are exciting and tools are being developed at a furious pace. But there are two sides to the e-technology coin. On the one hand, it can help amplify and improve supplier integration and cross-functional teamwork. It can help people discover business opportunities with a high payoff for everyone involved. On the other hand, it cannot erase the difficulties faced by global teams that seldom, if ever, meet face to face. Seizing the opportunities offered by e-enabled integration of product development and purchasing, for example, will still require plenty of the traditional discipline needed to forge a common language and promote trust among an increasingly diverse and global network of partners. Elmar Kades





Tomorrow's purchasing teams have an illustrious forerunner: "Renaissance man" Michelangelo Buonarotti. Not only a stupendous painter, sculptor, and architect, he was also an expert buyer and a pioneer in backward vertical integration of the supply chain. In his biography of the artist, Irving Stone reports that when Michelangelo was commissioned to create a new facade for the San Lorenzo cathedral in Florence, he spent months in Carrara searching for the right blocks of marble, helped prepare them, and supervised their transport. It is tempting to wonder how many more great works of art Michelangelo might have left to posterity if he had been able to speed up the selection and inspection process via Web-cam. Yet, even with convenient technology, the basic expertise still has to come from individuals and teams.

If, as we believe, the future of e-procurement lies in direct materials (demanding a shift in perspective to true competitive advantage encompassing quality, speed, and innovation in addition to price), it stands to reason that the purchasing organizations best able to manage the knowledge exchange between purchasing, product design, production, and sales/distribution specialists will have the best chances of capturing value. So, what steps can PSM managers take today to build or expand a competitive edge in knowledge?



NEW COMMUNITIES OF PRACTICE

In the current parlance, we suggest nurturing selected "communities of practice" in purchasing. A look at the landscape reveals the emergence of a number of new entrepreneurial roles for purchasing professionals, be it scouting for innovative ideas or trading futures and hedging risks on commodity exchanges. There is high value in consolidating such skills internally and recruiting new people in relevant areas. Acting now will help ensure that a company's purchasing organization can tap into the insights and expertise of relevant communities of practice (which may also operate as independent consulting businesses).

Tomorrow's purchasing teams will likely be more "virtual" than today's, but for value creation, what is more important than using the latest communication technology is that purchasing professionals continue pushing the envelope by challenging conventional value frameworks. Some successful teams today are doing so by leading the integration of purchasing and product development. Tomorrow's teams will pursue co-development with core suppliers even more radically. They will be supported by teams with more highly specialized roles, as specialist expertise in processes and product categories will be vital to achieve a differentiating level of excellence. \bigcirc





ENTREPRENEURIAL ROLES

Already today we are seeing the "knowledge/project coordinators" who generate added value by su- 🔵 🔵 🔵 🔵 🖜 The "traders" understand the mechanisms of commodity markets, have properbly managing the interfaces between purchasing and other business functions, particularly product 💮 💮 💮 💮 ound technical skills in trading on exchanges, and can transfer this skill to product development. These experts coordinate the overall procurement process and set its strategic direction, • • • • • • ucts not previously traded on commodity exchanges (offline and online), which manage cross-functional processes, set and track performance targets, and define the knowledge • • • • • also implies advising companies on how to hedge against risk for these products. creation agenda. This community of practice can be observed at Dupont and Sony (global localization).

objectives, e.g., network building with selected suppliers. Members of this community of practice, 🔘 🔵 🔵 🔵 🖜 🖜 The "supply chain experts" possess the company's deepest knowledge of logistics. epitomized by Toyota's approach to supplier management, are the source of a company's strategic 💮 💮 💮 💮 💮 Their role is to optimize the entire supply chain and interconnect with suppliers vision for the positioning of its suppliers. They understand the innovation needs of their own company 💮 💮 💮 🖜 🖜 and customers for production planning and scheduling. They are also the special-develop outsourcing strategies and also devise joint risk management strategies with suppliers to 🔵 🔵 🔵 🔵 a home to supply chain experts include British Oxygen Company and Ryder. deal with uncertainties.

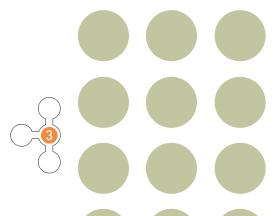
establish permanent links with customer engineers, chemists, advanced materials technicians, etc. 🔘 🔍 💮 💮 conducting regular customer surveys and implementing requirements, includto optimize TCO processes and to leverage knowledge across products or production technology with one of the optimize TCO processes and to leverage knowledge across products or production technology with one of the optimize TCO processes and to leverage knowledge across products or production technology with one of the optimized TCO processes and to leverage knowledge across products or LPP, design-to-process or design-to-cost approaches.

"Scouts" are another emergent community whose expertise lies in scanning for innovation opportunities 🔵 🔵 🔵 🔵 🔵 🔵 als in this community of practice. in both products and process, e.g., e-procurement. Scouts are the people who fill the company's supplier 🔘 🔘 💮 advance, understand how to involve strategic suppliers in a company's idea pipeline, and define innova- 💮 💮 💮 💮 or the purchasing function, providing it with entrepreneurial energy and a good tion- and impact-based performance parameters for suppliers. Current shapers in the scout community 🔘 🔘 💮 💮 💮 oadmap to value creation in their particular areas of expertise. of practice include 3M and Cisco.

materials exchanges, e.g., CheMatch.

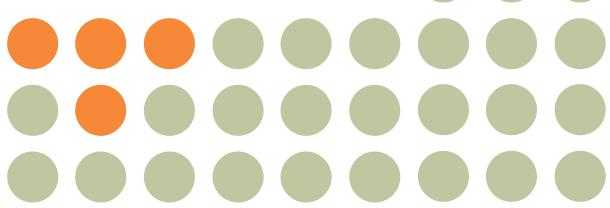
A further group of experts – the "consortium builders" – are developing around skills in specific fields, including hpi, Usinor/Achats, and Siemens. GE's TPN/Register is probably the oldest and best-known online home for profession-

Christian Harm, Khosro Ezaz-Nikpay



E-TOOLS: DO-IT-YOURSELF ePSM

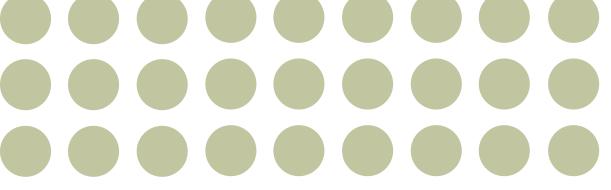
The past year, even the last few months, have seen an explosion of interest in electronic applications for the PSM arena. Auctions, exchanges, portals, and other exotic-sounding applications help PSM managers increase the value of their sourcing relationships, promising purchase price reductions of 5 percent or more. For the typical PSM department some sort of "ePSM" seems a must-have.



But beyond the notion of "do something now," there is often little guidance as to what tool to choose, and there are some substantial negatives about the existing applications. Among the issues:

- The new applications often come with high cost; for example, just a single auction can cost upward of US\$ 500,000, plus some portion of the savings to be paid to the auction provider.
- They can be complicated to implement, involving lengthy configurations, such as applications to link with SAP or other large databases.
- Multiple options exist for each application, and different applications apply to different categories, meaning multiple and often time-consuming choices need to be made for each application (Should I use a catalog or auction? Which is the right exchange or catalog to use? Should I invest in a purchasing information system, and if so, which one?).

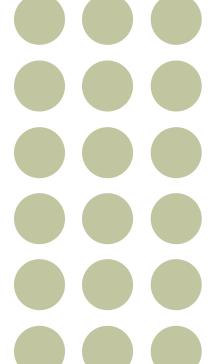
The crowded and complicated ePSM application landscape does not fit well with the "do something now" approach. However, if you're willing to drive some simple designs of applications yourself, you can move your company into the forefront of ePSM practitioners and capture the full savings inherent in ePSM with little capital outlay. This article gives you some tips for doing just that.



E-tools: A Solution for Making ePSM Happen

What many sourcing commodity managers need is a solution to the data problems they face every day. The fact is, the answer to how to lower total cost of ownership still is based mostly on purchase price, which means launching a team to collect requirements and bid them out to potential suppliers. This in turn means handling an often large amount of data: specifications, spend, and eventually bids.

Companies have faced these issues for years, however, and the solutions of some of the more e-savvy have made their data management jobs much easier. These companies have, on their own, using commercial off-the-shelf (COTS) software, designed applications that solve the data management difficulties. While no one standard has been developed, these applications share much of the same functionality, so that we can refer to them as a whole with some futuristic moniker such as "eTools." Today, more and more companies – from a paper manufacturer in Korea to a pharmaceutical company in New Jersey to a bank in Amsterdam – are using ePSM tools to save time and money.









Christopher Calvin

Christopher Calvin is starting his second year as an Associate with McKinsey's Purchasing and Supply Management practice. He has contributed to PSM optimization efforts in a variety of industry settings, including a US-wide telecom and travel sourcing strategy for a major quasi-governmental agency, a global telecom and data sourcing engagement for a multinational medical products manufacturer, and a global steel sourcing project for a capital goods manufacturer. Before joining McKinsey, Mr. Calvin was a project leader in the Strategic Sourcing Group with Bristol-Myers Squibb, where he worked with commodity teams. Mr. Calvin has a dual BA in Economics/Mathematics and Politics from Pfitzer College, and an MA in International Economics from Yale.

The key benefit of having a tailored ePSM toolkit is that all the data for a category can be easily managed, allowing teams to focus on analysis, not data. Here is the common functionality the eTools contain:

- Intuitive graphical user interfaces, with the "point-and-click" functionality of an Ariba
- Structured, powerful data handling using COTS relational databases, such as Access or Oracle
- Ability to store thousands of line items or rates
- Customization to the sourcing team process (meaning an eRFI designed, for example, to get precisely the answers you need to understand cost drivers for reducing TCO (total cost of ownership), or analysis applications designed for supporting negotiations).

Using just the functionality described above, PSM groups can develop a specification for eTools to make the data management job on sourcing teams immensely easier. Designing software yourself, using good specs with good IT support, which is more available now than ever before, may be the best way into the ePSM world.

Saving Time and Money the eTools Way

The design of eTools, as noted above, is customized to the sourcing team process. This means that companies have created three types of ad hoc eTools – one to support each step in the sourcing process.

- Electronic RFIs collect internal and external information, often via intraor Internet, to help build a fact base about suppliers and external spend. A Web-based eRFI at an automotive supplier, for example, gathered data on 500 potential suppliers – capabilities, costs, and savings ideas – in just two weeks.
- Electronic RFPs/RFQs help with the critical step of collecting bids from suppliers and collecting prestandardized information real-time.

Companies have used eTools to manage both auctions and sealed bids. Suppliers for the steel business of a major manufacturer, for example, used an eRFQ to create and submit dozens of lots, and kept the data in a predetermined format for easy analysis. The team had solid savings estimates and negotiation benchmarks in just a few days after bidding closed.

 Decision Support Applications help teams and sourcing managers analyze and understand the bid data as it's returned from suppliers, compare it with spend, and determine the optimal supplier selection. Using an eTool, a telecommunications team ran multiple savings scenarios with different supplier combinations, determining which combinations were lowest price.

So far, no one has developed a standardized set of these applications (though several are in the IPO-driven works with software start-ups). However, many companies have developed customized eTools ad hoc. These eTools are not difficult to develop, and the McKinsey PSM Practice has assisted many of our clients with DIY eTools. Furthermore, these eTools can also be created by any competent IT staff or development house at reasonable cost, making them a great investment for the payoff.

Designing eTools: It's Easy and Worth it

ETools are simple and cost-effective, and can be adapted to individual companies equally simply and cost-effectively, meaning they really do fit with the "do something now" strategy. Here's how to get started.

First, establish a common specification for each tool type. This could involve reviewing the eTools from other companies to decide which elements of theirs – screens, buttons, etc. – to include. See if some examples are available (many companies have designed them, and suppliers have seen them as well, so it is quite possible to view some prototypes by simply asking around). If no examples exist, discussing the functionality with your in-house IT staff should help you codify the design. You will want to develop some prototype eTools – those that will have screens you will want for any category, without being specific to one category of spend. Then, when you run specific categories, you can pick and choose screens and elements you want.

Second, get support from your internal IT group, and have them put together a specification and help obtain external programming support (you can have the eTools developed in-house, but we suggest going external since that can save you a good deal of time). The cost of developing these prototype eTools should run around US\$ 200,000 to US\$ 300,000, but could be as little as half that depending on the mix of internal/external development and your time constraints. The pharmaceutical company we mentioned designed their set for around US\$ 250,000.





Finally, determine a process for adapting the prototype to fit the categories on which your eTools will focus – for instance, creating an eTool just for office products, or chemicals. Each of your prototypes will need some modification, since they are designed with just a standard set of screens, databases etc. You'll want to modify them so they can capture the information your teams need. Cost for modification should be only around US\$ 10,000 to US\$ 20,000. Alternatively, you can develop one or two applications specifically for certain categories, using the same methodology, for around US\$ 50,000 a pop.

Once you have completed your suite of eTools, they can become the core applications you use to manage data for your categories over time – they are completely reusable. They also can easily interface with that confusing ePSM landscape, gathering data for auctions, feeding results into exchanges, and so on.

Use eTools to Support Strategy, Save Money, and Get into ePSM Now

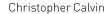
One major advantage of eTools is the ability to better match your application use with your sourcing strategy. In fact, the eTools reinforce the need to create a strategy, a step that is often lacking in the approach to using ePSM applications. What is a sourcing strategy? This critical step is necessary for each category of spend. The strategy tells you:

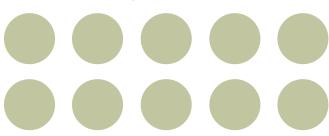
- What you're going to source: What is the scope of your commodity? Which suppliers will you use? An eRFI helps you build up your facts about the category.
- How you're going to do it: Will you issue an RFP, or get bids some other way? An eRFP helps handle the most complex bids.
- Where you will source: Which suppliers' bids make most sense? What are the implications of the bids on total cost of ownership? Analysis eTools help you understand the results.

A sourcing strategy specifies the answers to these questions for each spending category, and eTools support each aspect of the strategy.

In addition, eTools help you implement the strategy much more quickly. Typically, using eTools can shave 10 to 20 percent off the time to a complete sourcing strategy with reduced TCO. When every week of delay in implementing a sourcing strategy represents thousands of dollars of savings lost, speed is a real benefit. For instance, a team in chemical products saved an additional US\$ 57,000 in the first year of a purchasing contract simply by signing the contract two weeks ahead of schedule.

ETools can help in other tangible ways. Finding a better supplier, uncovering hidden spend, or obtaining more precise and often lower bids based on a better understanding of your company's requirements are just some of the added benefits. These benefits amounted to an annual savings of US\$ 1.5 million in purchasing costs for the chemical products company mentioned above. However, the biggest benefit may be that eTools provide a great way to do something now to realize the savings benefits associated with ePSM, and to position your sourcing organization to take advantage of the rest of the ePSM applications now on the market, such as auction tools or catalogs. And as an option you can cost-effectively employ for all your categories right away, eTools are a great example of the "do-it-yourself" entrepreneurship the electronic age is all about.

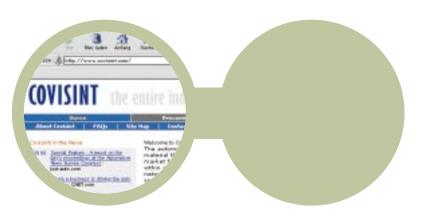






Electronic marketplaces are at the heart of ePSM, as it is here that more and more of the world's buyers and sellers are coming together in search of lower prices and new opportunities. Many formats and models are competing for attention. but only those with the greatest relevance for buyers will win. Years ago, young start-ups like FastParts.com launched niche markets for items such as obsolete electronic materials inventory. Then dot.coms like e-Steel, e-Chemicals or Ventro emerged as "independent trading exchanges" in markets with heavy buyer-and-supplier fragmentation. They succeeded in affiliating with major industry incumbents, but more often on the sell-side. As the

value creation prospects of these B2B ventures depend on time-to-scale (liquidity), the industry incumbents realized that what really counts is their transaction volume. And this past year saw them appearing on the scene, with Covisint, the mega-site announced by the "Big 3" auto makers GM, Ford, and Daimler-Chrysler, clearly leading the way. Here's a sampling of the Internet's most popular and interesting e-marketplaces in a variety of industries. Christian Harm





WWW.COVISINT.COM

The Wall Street Journal called it "Rocking E-Commerce's World" when General Motors announced plans for the GM TradeXchange last November. GM said it expected to move all its suppliers online by the end of 2001.

Like Ford, which announced its plans for a similar site on the same day, GM positioned its marketplace as a bold move to slash the cost of sourcing both standardized and customized materials. With the decision to join forces with DaimlerChrysler, thus creating Covisint, the "Big 3" are jointly embarking on an even bolder move: creating a marketplace (and possibly an independent, publicly traded company) to handle the car makers' purchasing, which tops US\$ 250 billion annually.

CommerceOne Inc., an Internet start-up and GM's designated partner for its share of the technology solution, will now work together with Ford's partner, Oracle, on building the mega-marketplace on a common standard. Initially, the Big 3 marketplace will focus on cost reduction through online purchasing of simple, standardized items. But more advanced online solutions are sure to follow for supply chain management and ultimately the design of customized equipment, such as car seats. Initially, the expected cost savings amount to US\$ 1,000 per car, but the sky's the limit for the cost and value enhancements possible through e-enabled integration of product development and purchasing.

INCUMBENT CONSORTIA

Not all online marketplaces were "born" online. There are also any number of brick-and-mortar marketplace consortia. The Global Aerospace & Defense Trading Exchange, powered by CommerceOne was founded by the industry leaders Boeing, Lockheed Martin, BAE Systems, and Raytheon. An as-yet unnamed venture of 14 petrochemical companies, including BP Amoco, Royal Dutch/Shell, TotalElfFina, will establish a platform for purchasing in the oil and gas industry. Metique was founded by Ispat for the steel industry.

Retailing is served by two competing marketplaces: WorldWideRetail-Exchangewas set up by retailers such as Auchan, Tesco, and Kingfisher in response to the unwillingness of the previously announced GlobalNetXchange, formed by Sears, Metro, Carrefour, and Sainsbury's, to share equity.







HTTP://TPN.GEIS.COM

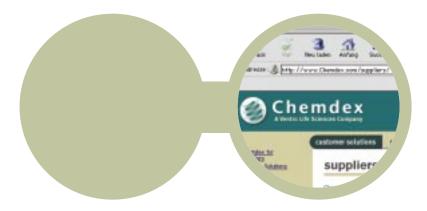
TPN Register was an instant "classic" from the day it opened its in-house purchasing solution – the trading process network – to the marketplace. Since then, it has been nominated for a place in the Smithsonian Institution's Permanent Research Collection – right along with B2C legends like Amazon.com.

The brainchild of GE's Lighting division, the first (in-house) incarnation of TPN slashed order processing time from 7 days to 1. Growing by leaps and bounds, it now also serves external buyers as a transaction aggregator, pooling buying power and increasing process efficiency through services such as online catalog provision, requisitioning, and order processing. Buyers use TPN as a platform for the negotiation process, i.e., from the issuing of a RFQ and clarifying technical questions by suppliers to the final award decision based on suppliers' online bids. It is funded by annual fees from buyers eager to benefit from TPN's network of 10,000 suppliers and from the bargaining clout that comes with an annual purchasing volume of over US\$ 15 billion. The biggest payoffs for customers – who include HP and CocaCola – are 10 to 20 percent lower processing costs.

WWW.FASTPARTS.COM

FastParts.com is a marketplace that meets a central need in the electronics industry, where stock can become obsolete almost overnight. In the past, this surplus inventory was sold (if at all) through brokers whose margins amounted to 20 to 40 percent. At FastParts.com, the guarantee of anonymity reduces the impact of markdowns on the buyers' and sellers' non-Internet business. To preserve anonymity, FastParts.com also ships parts to buyers and handles payment transactions as well. With AutoWatchTM, FastParts.com notifies registered buyers when the component they are searching for is on offer in the FastParts marketplace. In addition to trading in the automated spot market, sellers can also offer their products in a catalog environment.





WWW.METALSITE.COM

Opened by the US steel makers Bethlehem, LTV, and Weirton, MetalSite now boasts commitments for more than 100,000 tons of steel per month. This site's nearly two dozen sellers and more than a thousand buyers of steel take advantage of the site's marketplace mechanisms for looking up offers and posting bids.

At closing time at 10:00 a.m., Metal-Site delivers bids to sellers. At 4:00 p.m. the same day, buyers are notified whether their bids were accepted.

The current offerings are mostly surplus steel and industry news. However, MetalSite intends to become the online industry showcase for steel products where buyers will find fixed prices and applications that will streamline the procurement process. Trading volume has already surpassed 1 percent of US consumption. In the medium term, the three partners expect to account for 3 to 5 percent of total world consumption – or US\$ 6 to 9 billion annually.

WWW.CHEMDEX.COM

Imagine you work in the laboratory at a life sciences company and regularly test complex new formulas. In the past, when you needed a certain chemical, you hunted through distributors' catalogs for the best prices, then phoned around to find someone who had it in stock. Today, you can just click through to Chemdex and access its catalog of more than 300,000 products from 140+ suppliers. Qualified users can also get online product safety data sheets, quality control data, and other detailed product information.

Chemdex allows buying organizations to negotiate individual discounts, which are then granted automatically when the authorized requestors call off the relevant products. This approach gives purchasing professionals more control over the procurement process as a whole. It also frees them from having to handle every single transaction. Integration with customers' ERP systems ensures that transactions are executed with maximum efficiency. Chemdex is now part of Ventro, a builder and operator of vertical market-place companies in the chemical and healthcare sector.



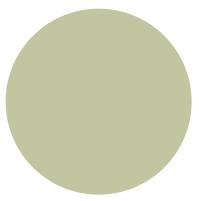












WWW.PAPEREXCHANGE.COM

PaperExchange.com is the leading electronic marketplace for the pulp and paper industry. It offers an answer to the chronic inefficiency of the paper market, where fixed capacity and difficulties in matching supply with demand have typically resulted in oversupply. With 2,400 registered members in more than 75 countries, PaperExchange is one of the few online marketplaces with a truly global scope.

It plans to differentiate itself further, and announced that it will provide credit approval, invoicing, and payment services for members. It will guarantee the credit worthiness of the partners in the transaction, thus making transaction completion more secure.

WWW.E-STEEL.COM

In the US\$ 700 billion global steel market, e-Steel has set up a neutral marketplace for prime and nonprime steel products. Among the roughly thousand companies participating, you will find steel mills, fabricators, service centers, and OEMs from more than 60 countries. While e-Steel was originally open only to charter members, it is now accessible to the entire steel industry. Users can post an inquiry or a product offering, which can be allocated by trading partners through search functionalities. Negotiations and closing the deal are also handled online, thus saving process time and cost.

From its initial sell-side focus, e-Steel has recently moved to affiliate with big users of steel, like Ford Motor Company, who will use this marketplace for sourcing from steel makers.

WWW.ALTRA.COM

Deregulation has changed the purchasing of power and gas significantly. Altra Energy Technologies provides the software needed to trade energy in various markets. Altra has also established Altrade, an electronic marketplace where buyers and sellers can post and view bids and offers anonymously. This makes the traditional flurry of phone calls and faxes needed to complete the deal redundant

The combination of the back-office transaction software with the frontend marketplace application could prove to be a superior business model.

WWW.VERTICALNET.COM

VerticalNet is a "lead generator". It helps buyers identify suppliers in a vast array of vertical industries ranging from advanced technologies to food and services. Each of the 57+ communities is supported by editor-moderators, mostly professional journalists. The offering includes industry news, supplier and product information, libraries, and career centers. VerticalNet is eager to become the leading portal for the various industries it serves. Recently, it has added transaction functions that will support users in selling materials and equipment.

WWW.NEWTRON.NET

With more than 8,000 companies and more than 45,000 product groups listings, Frankfurt-based Newtron claims to be Europe's biggest virtual industrial market on the Internet. Its "newtronRFP" module enables buyers to forward reguests - including attachments containing drawings and documentation - to a universe of suppliers. The NewtronAuction enables both buyers and sellers to open and conduct auctions. Newtron has been contracted by Deutsche Telekom's International Procurement Office in Singapore to establish an electronics marketplace in Southeast Asia.

WWW.ORACLE.COM

Oracle Corp. has come a long way. First and perhaps still best known as the creator of relational databases, it moved into ERP software, and has now become the host of Oracle Exchanges, Internet B2B marketplaces that (naturally) run on Oracle software. Industry exchanges, such as Covisint, the open marketplace that

Oracle is codeveloping with CommerceOne for Ford, GM, DaimlerChrysler, and their partners, help buyers and suppliers exchange more information faster, thus increasing their productivity. The key services of Oracle Exchange are catalog hosting, spot purchasing, buyer and seller auctions, and transaction delivery.



WWW.MYSAP.COM

For many years SAP was the darling of investors. With its powerful suite of R/3 modules for Enterprise Resources Planning, it looked set to dominate the corporate IT arena. This bright outlook dimmed somewhat when SAP took longer than planned to launch MySAP.com. Designed as a portal that includes appli-

cations for B2B procurement and other business processes, MySAP.com offers solutions for the entire supplier-to-buyer procurement process, integrating functions such as receiving and invoicing. Needless to say, another key feature is integration with any SAP legacy system.





WWW.COMMERCEONE.COM

CommerceOne is widely regarded as Ariba's toughest rival in the race to create the world's top solutions for automated procurement. The business centers on "BuySite" software, which CommerceOne licenses to major corporations. CommerceOne took a big step forward when General Motors announced their joint venture to launch GM's Trade Xchange. When the Big Three decided to pool their efforts to create the world's first and biggest online automotive marketplace, CommerceOne was selected to be one of the

key technology providers for the automotive marketplace. But this is just one iron in the fire. CommerceOne is also building other marketsites, which it refers to collectively as the "Global Trading Web," including aerospace&defense, steel, and the petrochemical industry, among others. Each marketsite is designed to provide an industry-specific plattform for expansion. By acquiring small technology providers, CommerceOne has also expanded its service from providing catalogs to supporting transaction formats such as auctions.



WWW.ARIBA.COM

Operating Resource Management is the focus of Ariba – a company that has concentrated on automating large companies' procurement processes for every-day purchases such as professional services, office equipment, or expense items. Recently, the company created Ariba.com, a site that enables buyers and sellers to

automate their transactions via the Internet. Additionally, in the "Supplier Link" section, suppliers can publish their catalogs to all Ariba users. Through acquisitions of companies like Trading Dynamics or Tradex, Ariba also provides the technology to power marketsites such as CheMatch, Petrocosm, and MetalSite.



ePSM SOFTWARE PROVIDERS

equip companies with the tools to reap big savings through electronic purchasing. Their origins differ widely, but they are all heading in the same direction: providing extensive support of the purchasing process. Entry into the world of ePSM means becoming acquainted with the international effort to sell new ways to buy.

Christian Harm

WWW.FREEMARKETS.COM

A buyer tells you he's seen the price of a material drop 20 percent within four hours. A dreamer? No. A champion-league negotiatiator? Perhaps. A recent participant in online reverse auctions? Definitely. Reverse auctions are the specialty of FreeMarkets, a Pittsburgh-

based company with offices in Europe and Asia. Their claim to fame: helping buyer organizations identify the right items for reverse auctions, setting up detailed request-for-quotation information, searching for additional suppliers, and running the competitive bidding event.



WWW.PTC.COM

Parametric Technology Corp. (PTC) is among the world's ten largest software companies and has over 27,000 customers. Their traditional focus is on CAD/CAM software, but that's not what brought them into the limelight as ePSM software vendors. PTC's shot at glory in this category is "Windchill," a Web-enabled software capable of supporting what PTC calls Collaborative Product Commerce or CPC, their concept for integrating product development, procurement, and manufacturing. In early 2000, nearly

100 pilot projects were under way. This kind of software should deliver a lot more performance than traditional ERP systems. The seamless flow of ideas and concepts between partners in the value chain has the potential to reduce development time dramatically. Suppliers can be actively involved in all phases of product development. With nearly 5,000 employees and sales of more than US\$ 1 billion in 1999, PTC certainly has the resources to support its determination to become the leading provider of CPC software.



opportunities of the new electronic marketplace. But speed alone is not enough.

As companies prepare to capture the even bigger opportunities presented by the business-to-business market, they must combine speed with smarts and resources.

In helping establish more than 370 e-commerce entities over the last year, we at McKinsey know firsthand what it takes to launch successful new e-businesses.

That's why we've just created our own new venture - a worldwide network of e-business "Accelerators" designed to bring new e-ventures online quickly by giving them access to the expertise and the resources they need to jump start their new businesses.

E-EXPERTISE IN AN E-ENVIRONMENT

Our Accelerators are separate offices designed to provide comprehensive support and an ideal environment to enable clients to build great e-businesses at Internet speed. Staffed by our e-commerce experts, the Accelerators serve as launching pads for new businesses by providing the infrastructure and expertise necessary to nurture new ideas, and the access to a wide range of services from outside vendors necessary to turn those ideas into new businesses.

At our new Accelerator in Munich, our clients typify those who need to build e-businesses fast and smart:

- Traditional companies who need to leverage the electronic marketplace
- Dot.coms and traditional players entering new markets – typically US companies expanding into Europe
- Internet startups launching brand new e-businesses

We offer all the ingredients necessary to develop and launch e-businesses:

- Business plan development
- Interim management
- Streamlined access to vendors
- A stimulating and supportive environment for business incubation

Unmatched Knowledge and Experience to Strengthen the **Business Plan**

A great business needs not only a great idea, but also a robust plan for bringing it to fruition. We provide Accelerator clients quick access to McKinsey's collective global knowledge of industries, business functions, and e-business solutions. We work with clients intensively to bring this knowledge, as well as our







Expert Talent to Manage the Business

Often the biggest barrier to success is a lack of managers to make new ideas a reality. We bring on business builders – executives with real-world experience in creating Internet businesses – to play interim management roles until a CEO and COO are in place.

Access to "Best-of-Breed" Vendors

Another huge challenge faced by new e-businesses is the daunting array of outside vendors the new business must select and manage –

Website designers, software providers, IT integrators, specialized headhunters, tax and legal advisors – often 10 to 15 vendors and as many as 100 people. Our experience with vendors enables us to help clients quickly identify and select the vendors best suited to the situation. Our non-exclusive network of vendors works closely with the Accelerator network, for instance, by offering regular on-site office hours.

A Stimulating and Supportive Environment

From Silicon Valley to Silicon Alley, we've seen how e-ventures benefit from the stimulation provided by other entrepreneurs and a setting designed to meet the unique infrastructure needs of start-ups. Our Accelerators replicate these unique environments by bringing together all the people and resources necessary to develop and build the business concept. The "plug'n play"



physical infrastructure features offices with flexible and expandable layouts that support interaction among all the key players and allows the teams to concentrate on the task at hand, rather than being diverted by the need to acquire real estate, IT infrastructure, or basic business service contracts.

As pure e-locations, the Accelerators also shield the new e-ventures of established companies from the legacy traps and cultural restraints of their parent organizations during the critical incubation period. They offer total immersion in an exciting entrepreneurial atmosphere and the opportunity to network with other e-business builders on both an informal day-to-day basis and through organized events.

E-BUSINESS CONSULTING AT ITS BEST

Our mission is to be the leading business builder of the new economy. Accelerators@McKinsey are already helping clients around the world – in Munich, Madrid, London, New York, Toronto, and Silicon Valley. And Accelerators will soon be up and running in many other locations.

Unlike traditional incubators run by venture capitalists, whose raison d'être is to maximize the value of the VC investments, McKinsey's Accelerators concentrate on meeting the needs of our clients to capture the opportunities offered by the new economy. Our specialized e-commerce capabilities, combined with our business expertise and unique incubator environments, will enable our clients to capitalize on their own industry experience, their established brands, and their unique customer relationships as they build new businesses and expand their reach in the new economy.

Norbert Dörr

Norbert Dörr

Norbert Dörr is a Director in McKinsey's Munich office. He is a leader of the Firm's worldwide Aerospace Practice as well as a member of the leadership group of the German Electronic Commerce Practice @McKinsey. Since joining McKinsey in 1988, he has served clients in the telecommunications, aerospace, defense, and other hightech industries. He is currently focusing on business-to-business e-commerce opportunities in the electronics, assembly, automotive, and aerospace industries. Mr. Dörr holds an MBA from the University of California, Berkeley, and an MS in Aeronautical Engineering from the Technical University of Munich.



You now have a taste of our new ideas and how we are working with clients to, in the words of Silicon Valley, "think digital." However, while we're on the cutting edge of new thinking, we're still very traditional – "analog" – in our approach to serving clients. As consul-



STEPHEN BRADLEY

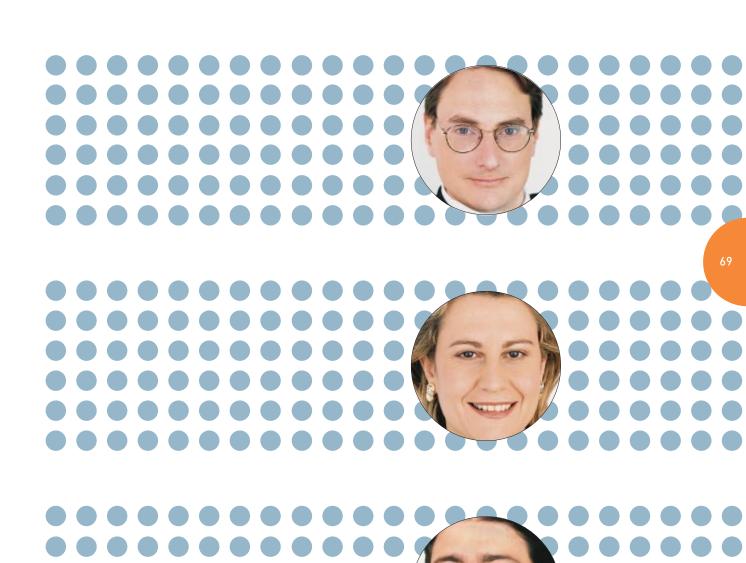
Stephen Bradley is a Senior Engagement Manager in our Munich office, and has worked with a wide range of clients in the automotive, machine tool, plant engineering, and process industries. His current focus in the universe of PSM is on helping clients to achieve rapid and significant material cost reductions, build world-class purchasing organizations, and develop state-of-the-art ePSM infrastructure. He recently assisted a major auto manufacturer in redesigning the purchasing organization for indirect materials and helped a leading basic materials conglomerate redesign its purchasing organization. Prior to joining McKinsey, Mr. Bradley applied his Engineering background (PhD from the University of California at Berkeley, MS/BS from MIT) at a number of high-tech companies, including Integrated Systems, Schlumberger, and Hughes Aircraft.

SECONDINA RAVERA

Secondina ("Dina") Ravera, a Senior Engagement Manager, joined our Milan office at the end of 1991, and is also a member of the European Petroleum Practice. A formidable frequent flyer, she has helped many clients in the machinery, energy, and the plant engineering industries to reorganize their purchasing departments, conduct competitive workouts for selecting new suppliers, and develop innovative partnerships based on strategies for joint value creation. Particular highlights along the way include introducing a new design-to-cost and PSM approach for one of the world's top industrial groups and, for a major energy supplier, reorganizing the engineering department to enhance co-design with suppliers and cooperation with purchasing functions. Ms. Ravera earned a degree in Electronics Engineering at the Politecnico of Turin in 1990 and an MBA from Insead in Fontainebleau in 1993

KHOSRO EZAZ-NIKPAY

Khosro Ezaz-Nikpay is a Principal in McKinsey's Cologne office. He has done extensive work in PSM, primarily with clients in process industries (chemicals, pharmaceuticals, and pulp and paper) and in the automotive sector. He has also served clients in the areas of strategy, post-merger management, pricing, and operational improvement. Recent PSM projects include PSM enhancement of a major pharmaceutical company and a high-tech ceramics producer, establishment of a procurement consortium as a stand-alone enterprise, performance improvement and organizational redesign of the purchasing function of a major chemical and pharmaceutical company, and benchmarking the suppliers of a car maker. Prior to joining McKinsey in 1994, Mr. Ezaz-Nikpay received a BSc from the University of California at Berkeley and a PhD in Chemistry from Harvard University. As a counterpoint to crafting new visions for clients, he particularly enjoys reading and writing poetry.









GÜNTER FUHRY

Günter Fuhry is a Principal in our Vienna office. He is a co-leader of the PSM Practice and also a member of the Assembly Sector. Since joining McKinsey in 1987, he has served clients in the automotive, steel, and machinery industries in Europe, Asia, and Brazil, specializing in the fields of supply management, e-procurement, and operations effectiveness. He recently led a Europe-wide client engagement to adopt world-class supply management and define strategies for modular sourcing and supplier integration. He also spearheaded an effort to identify excellence in supply management and industry restructuring scenarios in a survey of 150 European, Japanese, and American automotive suppliers. He focuses on helping clients find innovative ways to reach championship form and keep on "jumping the curve" in improving purchasing and supply management processes. Mr. Fuhry holds degrees in Business Administration and Chemical Engineering from the University of Linz.

KATARINA DEMPSEY

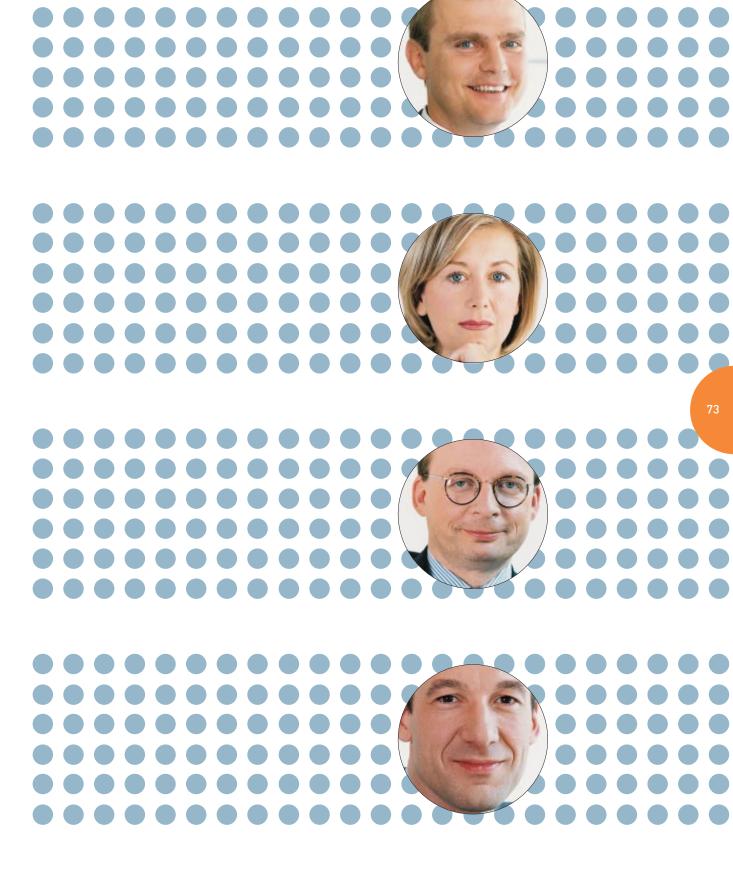
Katarina Dempsey is the Practice Manager of McKinsey's European Operations Effectiveness Group, and also responsible for codification and dissemination of leading-edge knowledge in the PSM Practice. An avid traveler, at home anywhere in the world, she currently divides her time between McKinsey's OE hubs in Paris, Cologne, London, and Vienna, working across various industry sectors, but with a focus on banking and insurance. She is a firm believer that travel and new technology fuel each other and, by extending our reach, give us the energy to push beyond our comfort zone and "think forward." Before joining McKinsey, Ms. Dempsey worked as an operations management consultant in the US and Asia for AlG, a multinational insurance and financial services company based in New York. As part of her extensive project work, she implemented a global purchase cost reduction program in US, Japan, Taiwan, and Hong Kong. Ms. Dempsey holds a BA in English from the University of Cologne and an MBA in International Management from Thunderbird, American Graduate School of International Management, in Arizona.

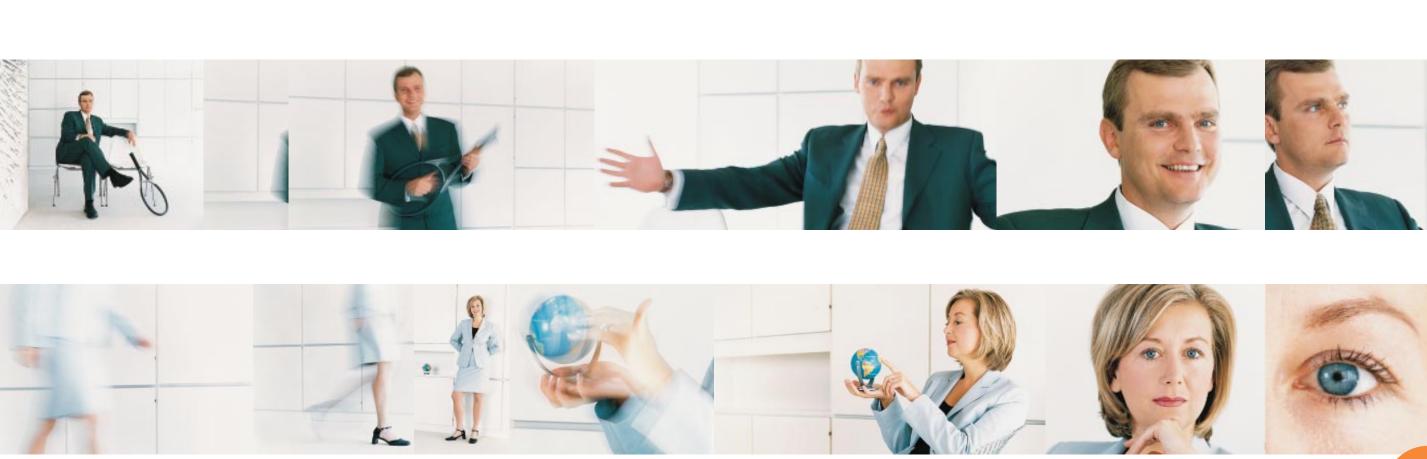
ULRICH FINCKE

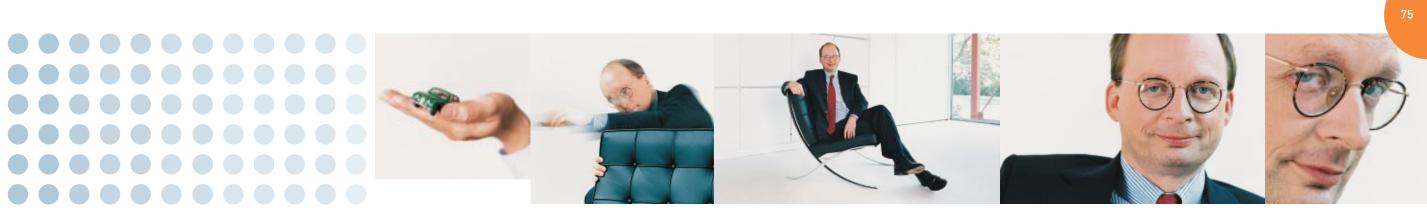
Ulrich Fincke is a Director based in our Cologne office and the Leader of McKinsey's European Purchasing and Supply Management Practice. He is also a member of the firm's European Assembly Sector Leadership Group and its worldwide Logistics Core Group. In the fields of supply management and logistics, Mr. Fincke has served clients in a wide variety of industries (automotive and mechanical engineering, chemicals, paper, and food processing) as well as in the retail sector. Pursuing his passion for improving the state of the art of purchasing and supply management, he has developed a number of concepts to help clients achieve a world-class position in PSM. Before joining McKinsey in 1987, he worked as an operations research analyst with Ciba-Geigy in Switzerland, where he concentrated on logistics issues. He holds a PhD and an MSc in Mathematics. His first sports car is now over thirty years old - and still gleaming.

MICHEL PHILIPPART

Michel Philippart is a Senior Engagement Manager in our Geneva office. He has worked with clients in steel, utilities, electronics, aerospace, and pharmaceuticals, and recently completed supply chain optimization engagements for two US companies in the automotive aftermarket segment. He is experienced in most aspects of PSM for production and non-production materials, including global sourcing strategy, supplier development, and cost modeling, and draws on six years of experience at Frito-Lay International, a unit of PepsiCo, where he designed and implemented global purchasing strategy initiatives. He also participated in the redesign and consolidation of Frito-Lay's European supply chain. Mr. Philippart is a Belgian citizen. He holds an MBA from Kellogg (Northwestern University) and a Metallurgical Engineering degree from the University of Liège. The knife in his hands is a beautifully crafted "Laguiole," a gift from a close friend, symbolizing a well-balanced combination of traditional values and high-tech refinement.











ELMAR KADES

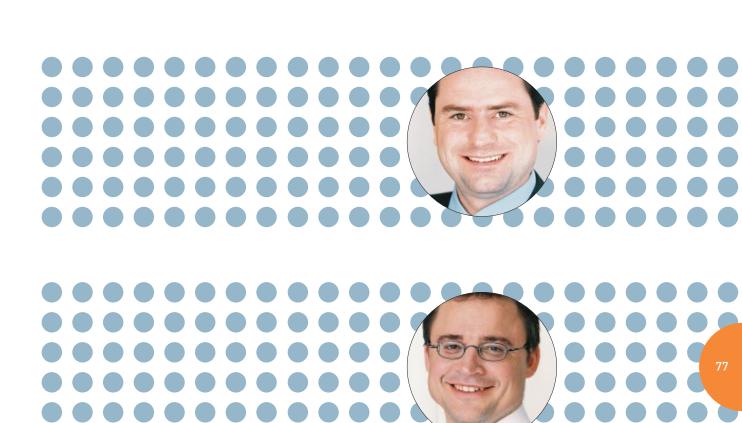
Elmar Kades, a Senior Engagement Manager in our Cologne office, is also a member of the Automotive & Assembly Sector. In keeping with his interest in the quality of "what's inside the bottle, not on the label," a special focus in his consulting work is mobilizing and training people to aspire to and achieve higher levels of performance. This interest has also generated new tools and training programs to advance PSM knowledge within McKinsey. His recent project experience in PSM includes developing and implementing a corporate sourcing strategy for an aerospace client with largely decentralized purchasing processes, leading a cross-functional worldwide team in optimizing the material cost of automotive components, and supporting the reengineering of an automotive purchasing organization to attain world-class PSM performance levels. Mr. Kades joined McKinsey's Zürich office in 1995 and transferred to Cologne in 1997. He holds an MSc in Chemistry and a PhD in Physical Chemistry from the University of Zürich.



Peter Breuer, a Senior Engagement Manager in McKinsey's Cologne Office, is also a member of the Assembly&Automotive Sector. He has served a variety of clients in both Europe and North America, and worked in our Cleveland office for one year. His professional interest in both product development and purchasing has resulted in practical solutions for more precisely targeting value creation to specific customers and forward-looking concepts for e-enabled integration of product development and purchasing ("ePDP"). His recent purchasing projects have focused on reducing the cost of outsourced services for a company in the steel industry and on developing and implementing an IT-based benchmarking tool for a global automotive OEM. Prior to joining McKinsey in 1996, Mr. Breuer was an Assistant Professor for Mathematics at the University of Cologne. He holds an MSc in Mathematics and Economics and a PhD in Mathematics, and was a member of Germany's national champion swimming team.

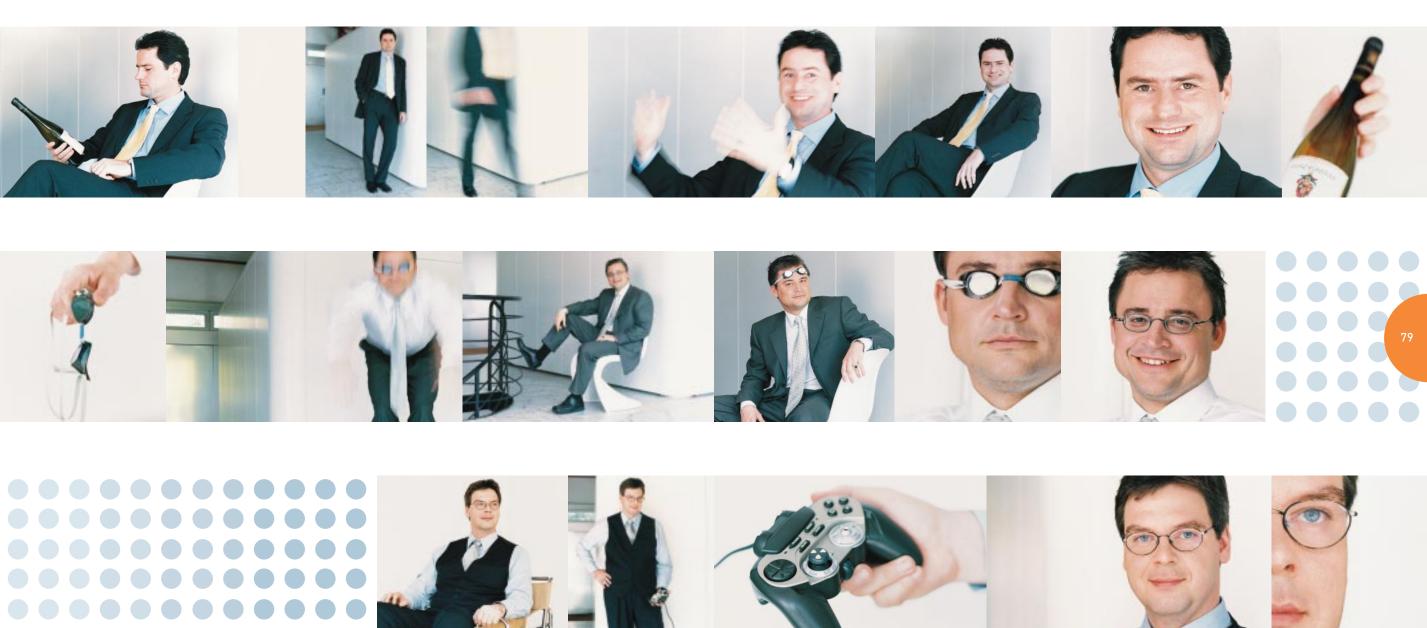
CHRISTIAN HARM

Christian Harm is a Practice Consultant specializing in PSM and based in our Vienna office. He has worked with clients in the transportation equipment, automotive supply, and plant engineering industries. He particularly enjoys helping clients "learn the ropes" of online reverse auctioning which, like Nintendo, teaches strategies and demands planning skills (and raises adrenaline levels). Before joining McKinsey, Mr. Harm worked for Unilever in Austria in a variety of functions. In his final position there, as Supply & Purchasing Manager of a local operating company, he initiated and successfully implemented conversion to local single-sourcing and participated in a pan-European team to improve inter-company sourcing. He holds a degree in Business Administration from the Vienna University of Economics and General Business Administration.











A LOOK AT THE LIFE OF... SECONDINA RAVERA

A Senior Engagement Manager based in McKinsey's Milan office, Secondina Ravera needed no convincing when Katarina Dempsey asked her to share some of the highlights she has experienced and perspectives she has gained as a member of the Purchasing and Supply Management Practice.

Q: What made you decide to become a consultant?

A: When I was a student, my dream was to become a "great top manager of a major international company." So, after earning an Engineering degree from Politecnico of Turin University, I joined McKinsey because I considered it the ultimate "Top Management University." Today, I am quite satisfied by that choice. My job has given me the opportunity to learn so many things about how to run a company from the inside out.

Q: Why did you choose PSM as a specialty?

A: I have always been excited by purchasing and supply management projects – for two main easons: First, these are cross-functional projects influencing all the key processes of a company from sales to product design, purchasing, manufacturing, installation and commissioning, and cost control, so they have a terrific and visible impact on business performance.

Q: What else?

A: The second thing is that they usually represent a win-win situation for everyone involved.

Internally, the engineers, purchasers, and the sales and marketing people all learn how to contribute in a more integrated way to continuously improving products and performance. Suppliers appreciate the increase in fairplay that comes with more transparent ways of "rewarding the good and punishing the bad." And the top management benefits because our PSM projects give them a reliable way to dramatically improve products and performance with a lever ten times more effective than the traditional, painful way of improving productivity through layoffs.

Q: What do you like best about consulting?

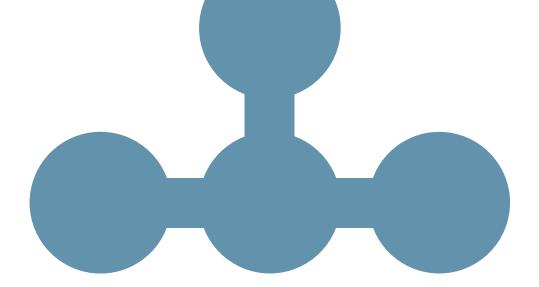
A: I have always been motivated by variety and excellence. At McKinsey I have found both. Over the last seven years, I have worked all over the world, in many different sectors including assembly-machinery, airlines-railroads, and energy-telecoms-IT, on a variety of topics - strategy, organization, sourcing, manufacturing, M&A, sales, you name it. And with many different people - about three hundred different team members counting both McKinsey colleagues and clients. In terms of excellence, I have learned about high quality and rigorous approaches and tools from "Day One" of my work, and I am still learning a lot every day.

As a consultant, you do not control all the levers for influencing results. You can recommend an approach and explain the rationale for selecting that solution, but you are not the one who ultimately decides. In every line of work there is something one would change...

In your experience, what are the biggest :Q challenges companies face today in PSM?

Least? :Q

It is extremely difficult – even for world-class companies – to work effectively in cross-functional teams. Functions seem to be separated by Chinese walls. Sales people keep on adding requests for new features to product lines. Engineers are tinkering with their favorite new design releases and coming up with new specs. Purchasers are the only interface to suppliers, and their main focus is asking for discounts. Manufacturing is struggling to fulfill all the design requests while making operations leaner. Cost accounting manages hundreds of codes and goes around analyzing things hardly any of the other functions ever look at. Achieving excellence in standardization and design-to-cost, based on effective crossfunctional cooperation, continues to present a difficult challenge to many companies.





Q: What's a typical day like for you?

A: Yesterday started in northern Europe with an early ("painful") wake-up call and a hurried taxi to the airport. When I arrived at the client's office outside Milan, my team and I first met with the group of purchasers and engineers who are currently working out how to standardize one of the client's three core product groups. Then I had a one-onone session with the CEO-to-be to discuss the improvements he wants to highlight in the upcoming quarterly meeting with the heads of all the business functions. A hundred phone calls. A video conference with one of our PSM experts in California on the auction software they're using over there. Another taxi, dinner at a restaurant, another taxi, and finally back to the hotel. I think that I am not too far from the truth in estimating, on an annual basis, 900 taxi rides, 200 hotel nights, 400 restaurant bills, 150 flights... I cannot say that mine is a boring life in which nothing is happening!

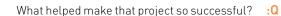
Q: If you weren't doing this as a career, what else might you be doing?

appealed to me - though working days and nights to pay my suppliers would worry me!

Q: Tell me about one particular client challenge and how McKinsev was able to help.

A: If I look back on my last few years of client work, I recall with pleasure many experiences that were 🔘 🔘 🔘 with clients. In particular we were able to help an Italian company, bought by one of the world's leading US-based conglomerates a few years before, to become a reference point on PSM/redesign-tocost. The corporate chairman wanted to meet directly with the client/McKinsey team in Florence, and afterward he became one of the key champions of the approach across the corporation, integrating it into the Group-wide "Six Sigma" program. The focus of our efforts was to improve supply management for the parts of a specific engine, and the impact of the approach has been outstanding: We reduced purchasing expenses by about 20 to 30 percent, improved cycle time, created more robust engineering solutions, and streamlined the internal engineering and purchasing processes.

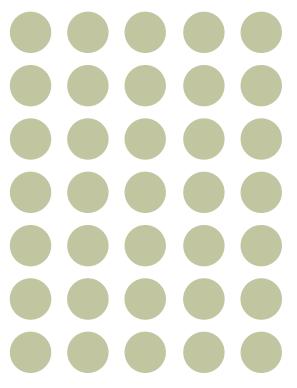
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in our client work, but at this client they all came together in an amazingly powerful way: Question everything - no prejudices, tackle costs at their origin; look at total ocst of ownership, and create transparency between performance and costs. Meeting ambitious targets requires a radical mindset, setting o creation. No auts, no glory, meaning that results come only through systematic, well-If there were one piece of advice you could give com-

panies grappling with PSM today, what would it be? Leverage the e-world in any way possible by exploring and implementing new approaches. You'll :A A: I would probably be an entrepreneur. The idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always on the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always of the idea of running my own business has always always of the idea of running my own business has always always always of the idea of running my own business has always always always of the idea of the idea

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Readers who would like to know more about McKinsey's Purchasing and Supply Management Practice are invited to contact us:

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McKinsey's Operations Effectiveness Group and its Practices

