

VOLUME VI NUMBER 1
First Quarter 2003

EXECUTIVE
AGENDA

IDEAS *and* INSIGHTS *for* BUSINESS LEADERS



TECHNOLOGY:
The New Management Imperative

ATKEARNEY
an EDS company

TECH TOMORROW

- Information Technology: The Fourth Economic Imperative** 5
Like capital, labor or raw materials, IT can be the deciding factor in economic and marketplace success.
- Bringing Agility to IT** 8
Why should web services, and the agile environment they create, be on your radar screen today?
- A New Mandate for E-Business** 19
The new three Cs of e-business reflect greater alignment between e-business initiatives and corporate strategy.
- Outsourcing the Decision to Outsource** 25
Business process outsourcing has become an all-out test of corporate endurance. Read how to pass.

VERTICAL VIEW

- From Projects to Portfolios: A Strategic Approach to IT Investing** 35
A big-picture approach to IT spending is key to the success of large financial institutions and other IT-intensive businesses.
- Beyond Product Innovation: An Auto Industry Perspective** 45
Consumers may clamor for hot new products—but cutting-edge processes are just as critical for automakers.

MANAGEMENT EDGE

- CRM: Moving Toward Customer Value Management** 51
CRM isn't dead; it's morphing. Striking changes have begun in the way companies and customers interact.
- Building a Better Bridge** 60
In the rush to integrate IT systems after a merger, companies often overlook one thing: It's not always a good idea. Here's how to decide.
- Maximizing Value from IT Investments** 67
If ongoing costs take a big bite out of your information technology budget, how do you make room for IT that adds new value?
- The Keys to Managing Mega-Projects** 76
It's never been harder to deliver technology-enabled transformation programs on time, on budget and on target. Read about two companies that did.

FIRST PERSON

- Getting the Machines to Talk to Each Other** 85
Enterprise integration—helping systems and people to communicate across company boundaries—is on its way. Opportunities and obstacles abound.
- Funding Innovation: A Higher-Order Advantage** 91
Now is not the time for companies to cut back on their innovation investments. Here's why.



TECHNOLOGY

Catalyst and

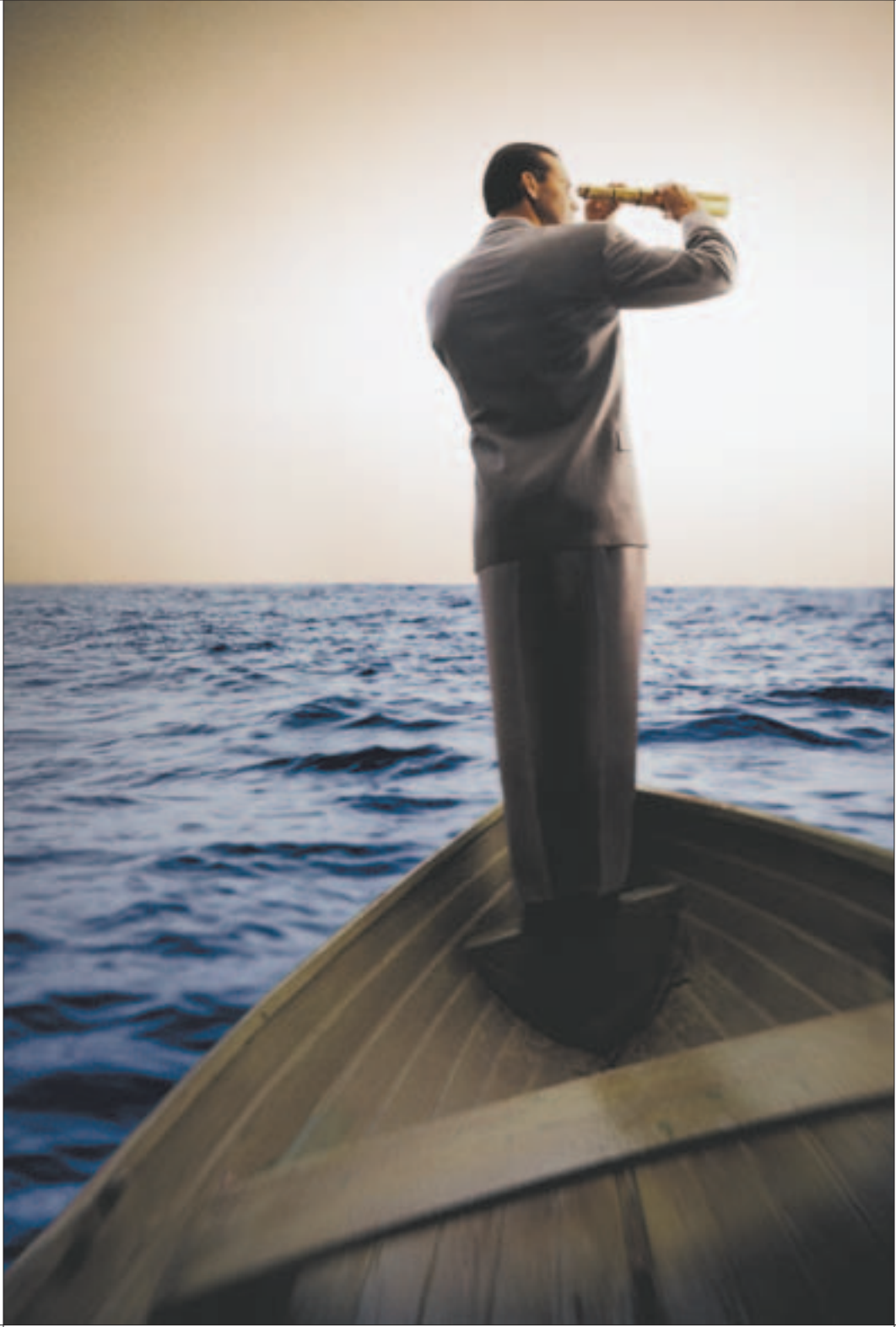
In the 21st century, technology embellishes our personal lives, makes our work both easier and more challenging, and invades or enables virtually everything we do. Its pervasiveness as an engine of economic and industrial growth is unparalleled in human history.

For business leaders, information technology management has been elevated alongside such business tools as strategy, organization and culture as one of the most important drivers of competitive advantage.

We celebrate and value technology today. And sometimes we curse it. But it is certain that when wielded effectively, it has remarkable power. This edition of *Executive Agenda* is devoted to discussions on future trends and the strategic management of technology.

The background features a series of vertical bars in various colors (green, purple, teal, grey, brown, red, blue) and several thick, flowing, overlapping lines in shades of green and yellow, creating a dynamic and modern aesthetic.

Critical Resource



Bringing Agility to IT

Your technologists are talking web services; don't ignore them. This isn't just another "killer app." Technology standards on the horizon will drive a new, more agile, environment.

A shoemaker from the early 19th century would never recognize the modern equivalent of his job. Before the Industrial Revolution, a cobbler traced a person's feet by hand onto leather and custom crafted footwear based on those measurements. If that artisan were to stand in a department store today, gazing at dozens of identical pairs of shoes, he would doubtless wonder (albeit with horror) how they got to be so precisely alike.

Standardization is a powerful thing. It brings incredible levels of simplicity and flexibility to everything it touches. And when it moves outside an enterprise's four walls, the opportunities suddenly expand exponentially.

Think of the automotive industry; none of a car's myriad parts were standardized at first. Today, most generic parts are inter-

changeable, making them much cheaper due to economies of scale and facilitating all sorts of design efficiencies.

A similar breakthrough is looming on the horizon in information technology (IT). We believe an evolving model for delivering IT capabilities—a model we call "agile IT"—represents the next sweeping change in the way business value is delivered through IT. Agile IT promises ways to get more from existing IT investments, simplify processes and leverage partners.

Agile IT is made up of a collection of standardized components that can be reused and applied across different applications, with minimal energy required to fit them together. Web services are a driving force, and the reuse and flexibility that standardization enables are the key benefits. Just as

building machinery became much easier after parts were standardized, IT pieces will “fit” together much better as web services standards take hold.

While this new generation of technology is on the way, it will take a few years to mature. So why should web services or agile IT be on a senior executive’s radar screen today? Based on our research and client work, we see two compelling reasons: the potential for short-term benefits and the immense impact this technology is likely to have on all businesses as the technologies mature.

A NEW WAY FORWARD

Previous technologies solved specific categories of problems. Mainframes made business computing reliable and affordable; networks connected like with like. But IT creates problems, too. Heavy spending in technology during the e-business boom, decentralization, and heavy merger and acquisition activity are among the culprits for the seemingly intractable mess business and IT managers alike face today. Global companies are struggling to implement common business processes using a variety of incompatible IT systems. This incompatibility has created product, process and channel silos throughout most enterprises.

These inefficiencies are taking their toll. A.T. Kearney research reveals that the majority of IT budgets is funneled toward supporting ongoing operations—to maintaining the status quo—which leaves little room for new and innovative technology.

Enter agile IT, designed for simplicity and flexibility. Hardware and software vendors, network enterprises, and standards-setting groups have agreed on essential core standards, which means that modules have the potential to be used and reused among different platforms, applications and operating systems.

Agile IT represents an evolving model for the delivery of IT. It has the potential to solve many of the day-to-day problems that keep IT from delivering real and tangible business value. The keys to agile IT are simplification and flexibility.

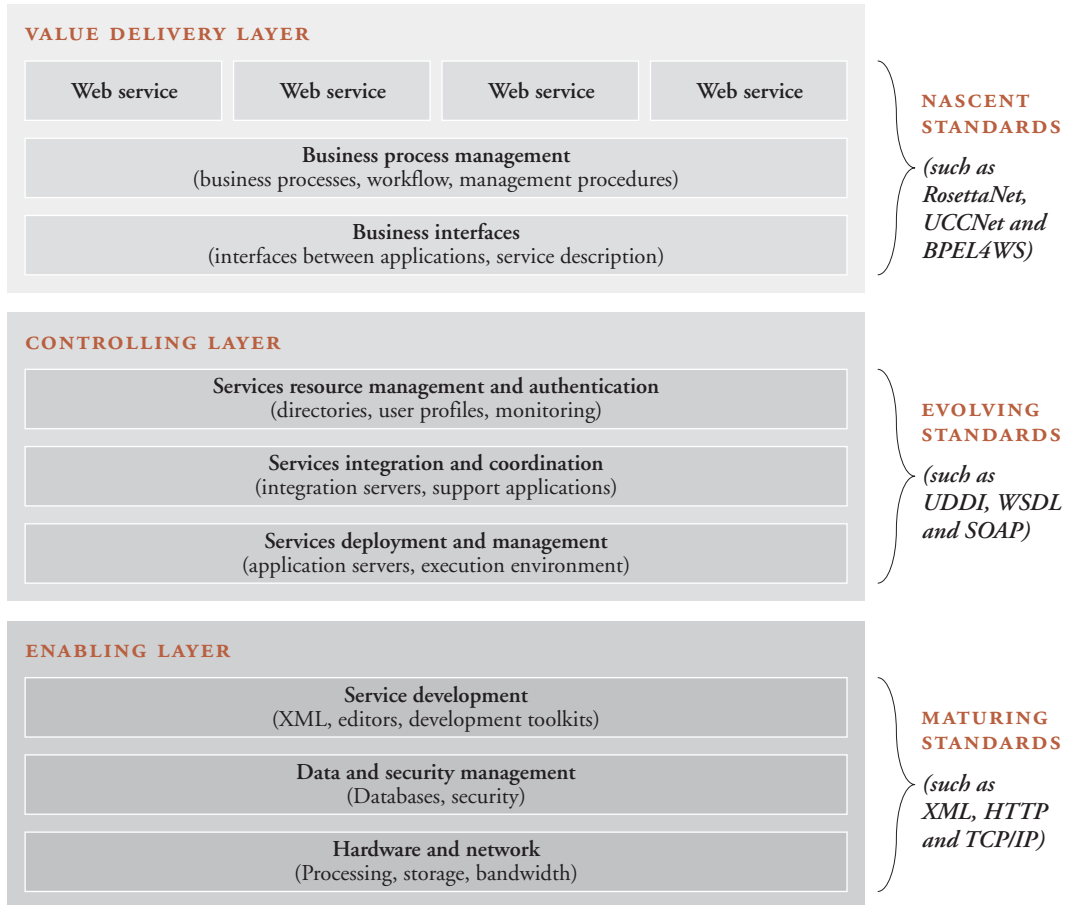
This emerging delivery system can be broken down into three layers (*see figure 1 on page 10*):

The value delivery layer: modules or components of business functionality—in other words, the technology that does the actual work of supporting both vertical and horizontal business processes, such as credit payment or inventory replenishment functionality—and the information required to carry out a process.

The controlling layer: the technology that enforces the rules governing which components connect under what circumstances and that specify what to do if things go wrong (such as work-flow software).

The enabling layer: the underlying computing platform (storage, processors and the like), data repositories and development environments needed to support business processing.

The catalyst for this new agile IT model is web services, a collection of independent,

Figure 1: *Web Services Stack*

Source: A.T. Kearney

self-describing components (in other words, modules that “publish” what services they perform and what they need to carry out those services for others) that can be called upon to execute a business service via the Internet. Web services are written to strict specifications and agreed upon open standards so they can interact with other similarly constructed modules. Web services are critical to agile IT because they take reuse to

a new level, free functionality from an underlying computing platform, and enable a dynamic and flexible trading environment.

Taking reuse to a new level. Although IT services companies and some other businesses have reused code internally for years, web services modules take technology recycling a huge step forward. Because they fit together without customization, almost like Legos™, web services modules can be reused

not only within, but across, businesses. New modules can be packaged in different combinations, within or outside the enterprise, to form more sophisticated business products and services. And legacy systems need not be replaced; they can be “wrapped” in standardized codes that ensure an easy fit with other technologies.

This puts an end to a great deal of interfacing, the work of getting different technologies to talk, which demands specialized human resources and huge chunks of time. How much money is at stake? Forrester Research estimates that as much as 35 percent of a company’s IT resources go toward

The end result: Companies will spend much less on information technology—or extract significantly greater value from today’s level of IT spend. By chipping away at product and channel silos, they will reduce redundancy. In addition, they will get products and services to market faster and more efficiently.

Separating functionality from platform. Enterprise resource planning (ERP) made much progress in delivering business functionality that could operate on any computer platform, particularly in areas such as finance and administration. Web services take platform independence to the

Agile IT promises ways to get more from existing IT investments, simplify processes and leverage partners.

maintaining and creating interfaces among IT applications.

Finally, because modules can be created once and made to automatically connect to other modules, business processes can be constructed more efficiently. For example, a bank that processes mortgages, offers personal loans and issues credit cards can extend the same payment processing module across all types of business. The bank ends up with one simple, consistent way of processing payments, rather than a separate process for each. Complexity becomes unnecessary unless it creates clear competitive advantage and is justified by a strong business case.

next level by decoupling, or unlocking, nearly any modularized business functionality from its physical shackles, allowing these modules to be retrieved from any computer processor anywhere.

When businesses can achieve this platform independence, they have the flexibility to make more economical and pragmatic business decisions. For instance, if all of an airline’s applications had ready access to its mainframe scheduling application, it could add a new channel (such as wireless communication) on a more economically viable platform. In this way, the airline can avoid a costly mainframe upgrade for a few more years.

Platform independence also means that companies will need fewer processors and less storage; it will be possible to redeploy many servers and processors because they often house duplicate capabilities. Sharing computing resources in this way brings efficiency where it's badly needed. Certainly, if a manufacturing company achieved utilization rates of 10 to 30 percent, it would be considered unacceptable.

In the travel industry, web services have allowed firms to separate their logistics and scheduling applications from the mainframe environments upon which they have existed for decades. Multiple airlines have made it possible for their customers to use scheduling systems via cellular phones and pagers—systems that were once used solely for internal purposes. At the same time, groups of airlines, hotels and rental car agencies with loosely integrated back-office systems are offering travel packages that offer up-to-date fares and availability from multiple enterprises.

Dynamic and flexible trading environment. Many business have invested in electronic data interchange (EDI), which provides one-to-one connections between applications. More recently, enterprise application integration (EAI) has enabled one-to-many communications via a centralized electronic “hub”—but this technology still requires proprietary adapters to connect applications to the hub. Agile technology, with its standardized modules that connect together directly, creates a more flexible “plug-and-play” environment. Modules can be

added and replaced quickly without the need for lengthy and costly systems integration.

The plug-and-play nature of agile IT will create two types of environments for business trading. One (often referred to as a “tightly coupled” environment) is rigidly defined and frequently controlled by the IT department, which strongly influences the users who have access to particular modules, the partners who can use the modules and the rules to apply if things go wrong. For example, a retailer and supplier piloted standardized business rules between their companies. These rules required the two companies to redesign their processes to eliminate having to manually reenter data and to integrate back-end systems. Data rekeying introduces a substantial percentage of errors into systems, each of which has to be reconciled manually. Back-end systems that understand each other are like two business people who speak the same language—each can understand the particular elements of a transaction. Just like people, back-end systems cannot process data they do not understand.

Although these two partners were sophisticated users of just-in-time replenishment, the results were substantial. The integrated back-end systems provided the necessary information for managers to adjust the promotion details related to new product introductions, when buyers are least familiar with the product and when mistakes can be most costly to the supplier. Sales for new products increased by 300 percent, compared to markets where the

approach and technology was not applied, and critical tasks such as product maintenance were reduced by 94 percent. The company attributed the results to improved data quality and timeliness.

These benefits are impressive in themselves. Yet the other type of trading environment (often called a “loosely coupled” environment) allows even greater flexibility—a useful characteristic in today’s ever-changing business environment where today’s competitors are tomorrow’s collaborators. This type of environment is built on process “orchestrators.” It is process-driven, rather than data-driven, and relies on more flexible

existing processes and procedures (such as payment processing applications). When this technology can be moved among computing platforms in response to business needs and strategies, enterprises can view IT as a portfolio to be managed (*see also, “From Projects to Portfolios: A Strategic Approach to IT Investing,” on page 35*).

Peering through the portfolio management lens, companies will invest in and “own” only the pieces of their agile IT environment that offer inherent strategic benefits. Modules common to many businesses will become commodities, driving down prices and spurring many providers to create

Back-end systems that understand each other are like two business people who speak the same language—each can understand the particular elements of a transaction.

rules. In addition, business decisions are made more often by business rather than IT leaders.

In a loosely coupled world, trading connections can be swiftly established and disconnected, creating a dynamic environment that will enable closer working relationships among customers, suppliers and partners. This flexibility is particularly important given the number of partnerships, mergers and acquisitions that companies become involved in to fulfill their strategic objectives.

MANAGING THE TECH PORTFOLIO

As the market matures, companies will look to buy web services offered by best-in-class providers that complement or replace their

specialized web services. Enterprises will have the opportunity to choose best-of-breed components that confer significant business advantages—and switch to other components when appropriate.

Businesses will be able to buy, rent or build depending on the strategic value of a module. At the enabling layer, where there is little potential for strategic advantage but lots of room for economies of scale, we expect a pay-as-you-use model to measure companies’ consumption of computing capabilities, such as network bandwidth, disk space, processing power and administrative services. Sometimes referred to as the computing “grid,” enterprises will buy

these computing resources from large providers that have the scale to control costs and achieve new efficiency levels. Because consumption peaks and valleys will be dissipated by the provider over a large pool of customers, asset utilization will skyrocket to 80 to 90 percent, versus today's 10 to 30 percent.

Today, electric utility providers manage energy distribution for their own power generation subsidiaries and for other third parties. In a similar fashion, tomorrow's enabling layer vendors will also offer services at the controlling layer. These services will include the monitoring and management of the enabling layer's reliability, security and throughput by means of monitoring alarms and executing against predetermined action and mitigation plans.

In the value delivery layer, we expect business utility providers (likely either new companies or new ventures by entities that currently have best-in-class operations and want to take them to market) to emerge that offer vertical and horizontal business services with scale advantages beyond the reach of single enterprises. Over the next two years, more widespread, but basic, horizontal business services such as human resource management, procurement and financial transaction processing will appear. Once horizontal services make their name in the market, more valuable vertical business services will follow.

When computing utilities evolve, business executives will make more of the decisions that affect IT. Alignment

between the business and IT will reach new levels. At this point, we expect the role of the IT department to evolve to focus mainly on defining the overall IT architecture and certifying that providers adhere to the overall architectural rules in areas such as security.

BEGINNING THE JOURNEY

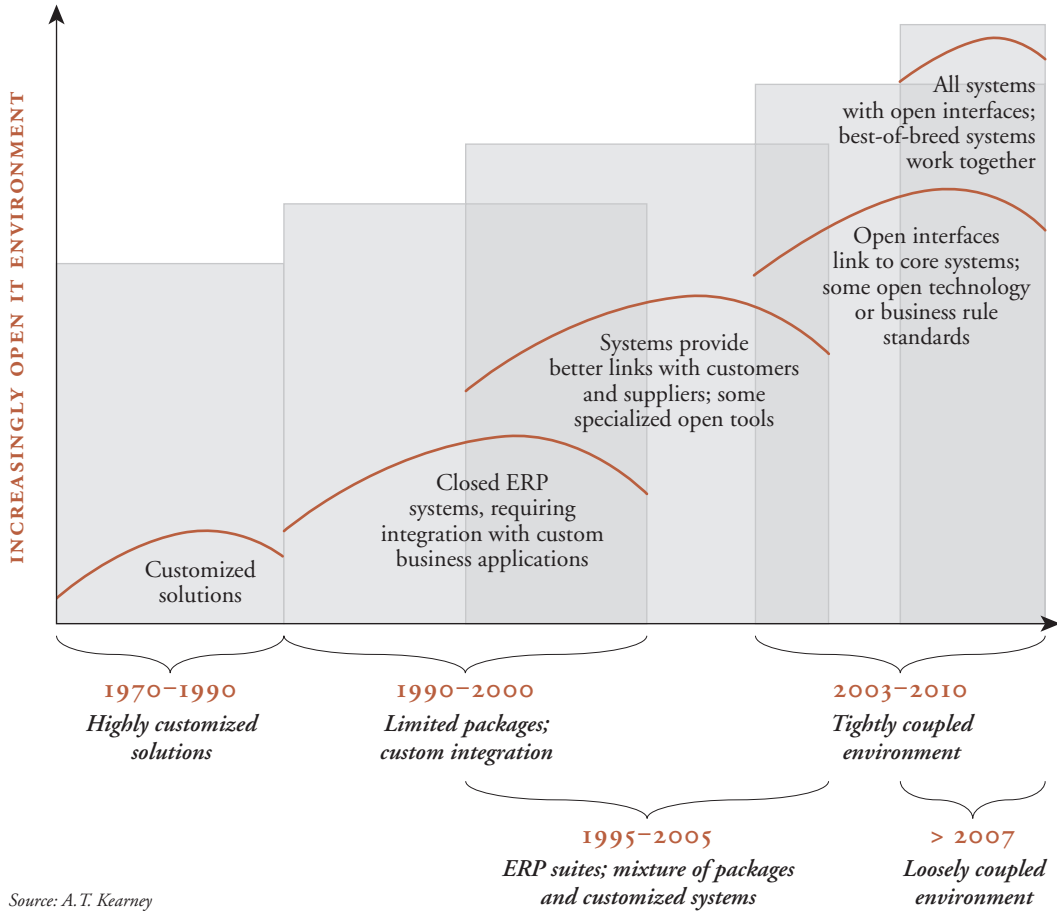
For most companies, the journey to an agile IT world could consume the balance of this decade (*see figure 2*). And, of course, the possibility still remains that standards will not take full root, and proprietary services will prevail—leaving us where we are right now.

But we see the trip as entirely worthwhile, given the value agile IT is likely to offer. And embracing this new model does not imply throwing ROI considerations out the window; there are short-term benefits to be gained for businesses that move forward methodically.

A.T. Kearney has developed a practical view on how companies can proceed in this uncertain environment. The first steps include the following:

Experiment with web services. Use web service standards to “wrap” existing legacy technology, such as billing, supply chain and customer service, and develop pilot application modules to begin building a module library. Wrapping existing technology delivers benefits quickly by letting an organization make a valuable asset available to a larger audience. Using existing investments, companies enable much more collaborative commerce with customers and partners.

Figure 2: *The Progression to Agile IT*



Source: A. T. Kearney

Make the functionality embedded in these modules available both internally and to select partners and start to use them for ongoing and new projects. The additional investment to incorporate web services standards in current IT projects can be minimal. Focus this early work on internal business processes first, where the environment is controlled and security is less of an issue. Enterprise resource planning or CRM systems are often good starting points.

Once you gain experience with web services internally, quickly move to the borders of your enterprise. You'll find tremendous untapped value here; cross-company transactions are often the most complicated and have the largest room for improvement.

Web services will surface new thinking, and some frustration, around application integration; it is critical to stick with the fundamentals that have made your company successful so far—including robust security,

sound architecture and high reliability. Today's experimentation with web services and application integration will be tomorrow's stepping stone to truly agile IT.

Understand your business processes. Take a close look at your business process portfolio. What do you do for your customers? What do you do with your partners and suppliers? What do you do internally? Start at a high level and slowly drill down into greater detail. Scrutinize your process portfolio, and evaluate yourself on execution. Break down your highest and lowest priority processes, as well as your best-in-class and worst-in-class processes, into business

is plain and clear: Simplification is now the rule. Examine your IT budget. How much is spent on maintaining code, interfaces, redundant applications and underutilized infrastructure assets? What proportion of the IT budget goes toward keeping existing applications running versus developing new business functionality? Identify areas where identical business modules are supported in multiple applications within and across subsidiaries, typically where process, product and channel silos are found. Are there truly enough strategic differences in your ordering, billing or fulfillment applications to justify separate and costly IT components?

Businesses that make it easy for customers to serve themselves often have happier customers and reduce their workloads.

modules. Your IT department or business units may already have bits and pieces of this information.

By the time you reach the business module level, you should have a detailed understanding of each module's alignment with your business direction as well as an idea of which modules your organization executes well and which it doesn't. This exercise typically uncovers a wealth of process efficiency opportunities above and beyond those necessary for agile IT—making it worth the effort.

Drive your modular IT vision. Articulate your agile IT vision and then drive that vision through the organization. The message

Look for waste in the enabling layer, like underutilization of computer servers and storage. From a procurement perspective, insist on vendors and integrators that support and deliver on the agile IT vision for all current and future projects. From a governance perspective, structure your IT and business group(s) to deliver on agile IT. They'll need to be able to curtail the proliferation of maintained code, interfaces and application and infrastructure redundancy—even if they cross corporate boundaries.

And arguably most important, consider your customers, business partners and suppliers as you drive your vision. Identify customer, partner and supplier groups that

will benefit from agile IT. Determine mechanisms that will enable those groups to use the modules you make available via the Web.

In essence, the more work you can have your customers or partners perform, the less work you must resource internally. Leveraging partners in this way will also create additional economies of scale, as they can spread costs across multiple customers. It also allows you to focus your IT spend on creating incremental business benefits such as customer service and supply chain efficiencies.

Articulate your future business model.

The first three steps shed a great deal of light on how processes interact with core competencies, and show where execution is weak and scale is insufficient. Consider outsourcing areas that do not provide strategic advantage; leave them to partners with scale or superior execution capabilities and focus on getting better at your core competencies. Because of the flexible nature of web services, outsourcing can be conducted in a more focused way. Rather than outsourcing an entire call center, for example, a business might outsource just the “level one” calls, those involving routine questions and feedback. Or a corporation might not outsource an entire manufacturing process, but just the inventory management portion.

Think about where it’s most effective to carry out processes. Businesses that make it easy for customers to serve themselves often have happier customers and reduce their workloads. Focus on providing modules for ordering, billing, simple inquiries and

account maintenance. In addition, consider modules that offload work to your suppliers, some of which they already redundantly execute, such as inventory management, product forecasting and other parts of your processes that will better link demand and supply.

Choose the right partners. While the evolving standards will allow you to mix and match modular products from various vendors and develop your own modular library on multiple platforms, there are inherent advantages to selecting a primary development platform and vendor. Software vendors like Microsoft are eager to establish a web services market presence and can help you get started. They have invested a significant amount on the potential of web services, and you can harvest this investment. You can likely negotiate favorable discounts in exchange for early mover joint marketing opportunities. Experienced systems integrators can assist in a similar fashion. In other words, your vendors will help you succeed, and you can then jointly trumpet the results.

You will likely want to train your developers on a primary platform, and you may consider consulting partners that are already familiar with this platform while you build internal capabilities. In many cases, you will be able to leverage web services capabilities that are delivered as a byproduct when you execute planned upgrades to your software packages and tools. In other cases, you will accelerate the adoption process by actively identifying, installing and training

on target web services platforms. You should insist that your primary vendors support the standards and provide you with the tools to capitalize on web services.

CONCLUSION

We believe agile IT represents the next big sweeping change in the way IT is delivered. It promises ways to build and sustain com-

petitive advantage through improved IT efficiency and better business and IT alignment. For companies that made extensive investments in ERP and other package solutions and succeeded as they rode the e-business wave, agile IT can help further extend and leverage the benefits. For others, agile IT offers an opportunity to catch up with—or even leapfrog—the competition. ■

CONSULTING AUTHORS

Chris Mitchell is an A.T. Kearney vice president. He leads the firm's development of its web services competencies. Chris has worked with major corporations and government agencies throughout the world in the areas of strategy, IT management, organization design, business improvement and IT architecture development.

John Cruse is an A.T. Kearney vice president leading work in global architecture and emerging technologies. His expertise is in technology strategy, enterprise transformation and implementation leadership. He focuses on creating business strategies that leverage emerging technologies, and implementing these strategies, encompassing process, technology, data and organizational components.

Jeff Gordon is an A.T. Kearney consultant serving as the lead for web services in global architecture and emerging technologies. He specializes in resolving integration and information technology challenges including web services, EAI and B2B integration.

EXECUTIVE
AGENDA

IDEAS *and* INSIGHTS *for* BUSINESS LEADERS

Executive Agenda® is published periodically by A.T. Kearney to offer fresh perspectives and encourage discussion on subjects of interest to senior executives and opinion leaders worldwide.

A.T. Kearney is an innovative, corporate-focused management consulting firm known for high quality, tangible results and its working-partner style. The firm was established in 1926 to provide management advice concerning issues on the CEO's agenda. Today, our 5,000 employees worldwide serve the largest global clients in all major industries. A.T. Kearney's offices are located in 60 cities in more than 35 countries in Europe, Asia Pacific, the Americas and Africa. A.T. Kearney is the management consulting subsidiary of EDS, the leading global services company. EDS provides technology strategy, implementation, business transformation and operational solutions.

AMERICAS | Atlanta | Boston | Buenos Aires | Caracas | Chicago | Cleveland | Detroit
Los Angeles | Mexico City | Miami | Minneapolis | New York | Plano | San Diego
San Francisco | São Paulo | Silicon Valley | Stamford | Toronto | Washington, D.C.

EUROPE | Amsterdam | Athens | Berlin | Brussels | Budapest | Copenhagen | Düsseldorf
Frankfurt | Geneva | Helsinki | Istanbul | Lisbon | London | Madrid | Milan | Moscow | Munich
Oslo | Paris | Prague | Rome | Stockholm | Stuttgart | Turin | Vienna | Warsaw | Zurich

ASIA PACIFIC | Bangkok | Beijing | Hong Kong | Jakarta | Kuala Lumpur
Melbourne | New Delhi | Seoul | Shanghai | Singapore | Sydney | Tokyo

AFRICA | Johannesburg

For information on obtaining additional copies, reprinting or translating articles,
and all other correspondence, please contact:

A.T. Kearney, Inc.
Marketing & Communications
222 West Adams Street
Chicago, Illinois 60606 U.S.A.
1 312 648 0111
fax: 1 312 223 6759
email: insight@atkearney.com
www.atkearney.com

Copyright 2003, A.T. Kearney, Inc. All rights reserved.

No part of this work may be reproduced in any form without written permission from the copyright holder.
A.T. Kearney® is a registered service mark of A.T. Kearney, Inc. Executive Agenda® is a service mark of A.T. Kearney, Inc.
A.T. Kearney, Inc. is an equal opportunity employer. EDS® is a registered mark of Electronic Data Systems Corporation.

ATKEARNEY®
an EDS company